REPORT RESUMES

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NEW PATTERNS OF EMPLOYMENT, PROCEEDINGS OF THE CONFERENCE-WORKSHOP (CENTER FOR CONTINUING EDUCATION OF WOMEN, UNIVERSITY OF MICHIGAN, ANN ARBOR, MARCH 29, 1966).
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DESCRIPTORS- *CAREER OPPORTUNITIES, *EMPLOYMENT PATTERNS, *PART TIME JOBS, *WORKING WOMEN, *COLLEGE GRADUATES, EMPLOYER ATTITUDES, OCCUPATIONAL SURVEYS, FEMALES, BIBLIOGRAPHIES, STATISTICAL DATA,

THE CENTER FOR CONTINUING EDUCATION OF WOMEN AT THE UNIVERSITY OF MICHIGAN AT ITS SECOND CONFERENCE EXPLORED PROMISING FIELDS OF EMPLOYMENT FOR COLLEGE TRAINED WOMEN, PARTICULARLY THOSE WHO COULD WORK ONLY PART TIME. SPEAKERS PRESENTED A NATIONWIDE VIEW OF WOMEN IN THE LABOR MARKET, DESCRIBED THE ATOMIC ENERGY COMMISSION'S PROGRAM IN HIRING WOMEN, SPECULATED ON REASONS FOR LIMITATIONS TO WOMEN'S CAREER OPPORTUNITIES, AND SPOKE OF THE NEED FOR ACCOMMODATION TO CHANGE, POINTING OUT MAJOR REVOLUTIONS AFFECTING THE CURRENT MARKET. PANELS CONSISTING OF EMPLOYERS FROM BUSINESS, GOVERNMENT, AND INSTITUTIONS OF HIGHER EDUCATION DISCUSSED WRITING, EDITING, AND LIBRARIANSHIP, COLLEGE TEACHING AND ADULT EDUCATION, RESEARCH IN THE SOCIAL SCIENCES AND HUMANITIES AND IN PHYSICAL AND BIOLOGICAL SCIENCES, AND ADMINISTRATIVE AND STAFF POSITIONS. (A PROGRESS REPORT SINCE THE INCEPTION OF THE CENTER IN SEPTEMBER 1964 AND A LIST OF STAFF AND COMMITTEES COMPRISE A PREFACE. APPENDIXES INCLUDE A STUDY OF ANN ARBOR'S LOCAL OPPORTUNITIES FOR WOMEN, TIPS ON PREPARING RESUMES, A BIBLIOGRAPHY OF RECENT AND LOCALLY AVAILABLE PUBLICATIONS ON WOMEN'S CAREER OPPORTUNITIES, AND A ROSTER OF ATTENDEES.) (RT)

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PROCEEDINGS

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EDUCATION OF WOMEN

The University of Michigan

NEW PATTERNS OF EMPLOYMENT

PROCEEDINGS

of the

Conference-Workshop

March 29, 1966

CENTER FOR CONTINUING EDUCATION OF WOMEN
Michigan League, The University of Michigan, Ann Arbor

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CENTER FOR CONTINUING EDUCATION OF WOMEN
THE UNIVERSITY OF MICHIGAN

A PROGRESS REPORT 1965-66

The Center for Continuing Education of Women of The University of Michigan, in operation since September 1, 1964, gives information about university and college programs to the returning woman student; offers advice on educational and vocational planning within the framework of home responsibilities; and helps the woman, uncertain as to what she should do, consider academic and employment possibilities in keeping with her interests, abilities, and time limitations.

In performing this service, the Center refers woman to appropriate offices of the University for admissions, testing, academic counseling, psychological counseling, financial aid, or placement; works closely with the University administration and faculty to develop flexible programs which meet the special requirements of adult women; maintains a small library of information on women's education and employment, catalogues of nearby two and four year institutions, and a file of materials on 100 vocations.

The Center aids all women interested in continuing their education on a graduate or undergraduate level. Those who come to the Center may be young graduate student mothers, middle-aged freshmen, women whose training is obsolete and in need of up-dating, or women whose interests have changed to a new field. Occasionally, men come in for consultation, either with their wives or to get information for them. A rather unusual group of participants are the foreign women, most of them wives of students or staff members. We also have other visitors from abroad. Through personal interviews or correspondence, contacts have been made with representatives from: Mexico, Brazil, Peru, Venezuela, Taiwan, Africa, Australia, Philippine Islands, Finland, India, Japan, Okinawa, and the tiny island of Mauritius in the Arabian Ocean. Our office has a liaison with the International Center, and with International Neighbors, a local club of 400 women who help foreign wives adjust to life in Ann Arbor.

By June 1, 1966, 778 names were included in our file of participants. These are the women whose objectives, educational or vocational, the Center is facilitating and about whom we have considerable information, usually on our standard "participation form". This figure does not include all the telephone calls, letters or casual drop-ins at the office. In addition to these personal contacts with participants, the Center provided information and guidance on a larger scale for 500 at the 1965 and 1966 conferences, and 100 more at the 1965 sub-professional social work course in Detroit. Taking into consideration some duplication, it seems clear that the Center has assisted well over a thousand women since its opening in 1964. The steady influx of new participants, recently increasing at the rate of about thirty a month, indicates the persistent need for the variety of service provided by the Center at The University of Michigan.

A postcard survey of 500 participants, initiated in November, 1965 shows their predominantly academic objectives. Replies from 420 of the 500 women (an 84% response rate) indicate that since coming to the Center, 65% had registered at institutions of higher learning or had definite plans to enroll for a specific term. An additional 15% had less precise time schedules, but indicated intent to take academic courses at some time. In summary, 80% of the respondents either are now or will be working toward degrees.

The geographic range of institutions which these women are attending shows that they are not being channeled exclusively into The University of Michigan. Although 160 have enrolled here and 22 definitely plan to do so, 90 are attending or planning to enter other institutions: 57 in Michigan, 3 in Ohio, 4 in California, and 1 in Vermont. Depending on their individual objectives, they are students in junior and community colleges, four year colleges and universities, or secretarial and professional schools. A few are taking extension and adult education courses.

The Center does not offer special classes or seminars, although it co-operated in sponsoring an experimental social work course in Detroit during the summer of 1965. With few exceptions, participants can follow regular or individually tailored academic programs in the 17 schools and colleges and 8 major extension centers of The University of Michigan. Our Center continues its cooperation with similar offices for continuing education on other campuses so that participants can be referred to appropriate staff members if they change residence.

To provide social contacts for our participants, the Center has instituted a series of coffee hours for small groups generally with similar academic interests. As on other campuses, the returning student appreciates these occasions to compare experiences, successes, and obstacles to continuing their education.

The Center has no scholarship funds of its own, but gives information about sources of financial aid and, when appropriate, recommends candidates. On the local campus, one participant holds an undergraduate scholarship in the College of Engineering, and another has been for two successive years a winner of highly competitive Hopwood Awards in writing. Several other participants have received teaching fellowships, or other forms of assistance from individual academic departments. In addition, the University Office of Financial Aids has provided grants-in-aid and loans for both full-time and part-time students.

From the beginning, the Center has given special attention to the professions for which talents and experience of mature women are a decided asset: nursing, social work, and teaching. Three special projects in nursing, social work, and basic education have been undertaken.

Mature Women in Nursing. Enough nurses come into the Center asking help in choosing a different profession to cause us some consternation. Knowing the universal shortage of nurses, it is unsettling to find any nurses intent on abandoning the field. In cooperation with the School of Nursing, the Center is exploring ways of using registered nurses with family responsibilities in hospitals. The Center is conducting a small, local survey to discover the obstacles that divert women from the nursing profession or prevent their returning to it. Our preliminary findings indicate that the traditional eight hour rotating shift in hospitals is a major stumbling block since that schedule does not fit the pattern of family life.

Sub-professional and Part-Time Jobs in Social Work. In cooperation with the University of Michigan School of Social Work and the United Community Services of Metropolitan Detroit, the Center sponsored a six week course to give information about the field to women interested in becoming social work aides. It was also hoped that sub-professional social work jobs might be a side effect of the course. The 104 women taking the course felt that they had learned a great deal and the Center has had many requests for a repetition of the course, but the jobs did not materialize in any great numbers although more are in prospect for fall. New part-time opportunities are developing within the state and local government social welfare units in Michigan.

Basic Education. The Center's concern with basic education originated with a group meeting of several women who individually had expressed a desire to be trained as teachers of adult or functional illiterates. They collected literature on the subject, information about appropriate University of Michigan courses, and visited places specializing in this kind of instruction in nearby cities. After several months of regular meetings in late 1964 and early 1965, they recommended to the School of Education a one year inter-disciplinary graduate program for basic education teachers. A faculty committee is working on the development of a prototype plan for a master's degree with concentration in this area. Members of the original group are now contributing to public school and government sponsored literacy projects.

Conferences. Two conferences have been held by the Center: "Opportunities for Women through Education," March 16, 1965, and "New Patterns of Employment," March 29, 1966.* The first conference emphasized educational and training requirements for employment in the fields of education, social work, the health sciences, library science, mathematics, physical sciences, engineering, and liberal arts programs for undergraduates. The second conference explored several promising fields of employment for the college trained women. The five areas of concentration were writing, editing and publishing; college teaching and adult education; research in the social sciences and humanities; research in the physical and biological sciences; and administrative and staff positions.

Support for Center. The sympathetic interest and cooperation of the administration and of the colleges, schools, departments and other units of the University, which the Center enjoys, is an indispensible encouragement. The extent of this cooperation, so far as we can tell, is unique to this University.

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* The proceedings of both conferences are available at the Center for Continuing Education of Women, Michigan League, The University of Michigan, Ann Arbor, Michigan, 48104: *Opportunities for Women through Education; New Patterns of Employment*. Price: $1.50 per copy; the set, $2.50. Checks payable to The University of Michigan. Account #31033.

Another major source of support is the Alumnae Council of The University of Michigan which has adopted the Center as its project for a three year period. Alumnae clubs throughout the nation are raising money to help finance the Center's program.

THE UNIVERSITY OF MICHIGAN
CENTER FOR CONTINUING EDUCATION OF WOMEN

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Helen Hornbeck Tanner, Acting Director
Myra W. Fabian, Counselor
Jane Gibson Likert, Counselor
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The staff of the Center gratefully acknowledges the generous contribution made by the speakers, panelists, recorders and hostesses who participated in the "New Patterns of Employment" conference, and the help of the following people:

CONFERENCE PLANNING COMMITTEE

Mrs. Stephen S. Attwood
Mrs. Arthur W. Bromage
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BIBLIOGRAPHY

Georgia P. Watermulder

LOCAL EMPLOYMENT OPPORTUNITIES

Nancy Gregg Sippel

THE MORNING SESSION

Helen Hornbeck Tanner, Acting-Director, Center for Continuing Education of Women:

Good Morning! The Center for Continuing Education of Women is pleased to see all of you here for the opening of our conference on "New Patterns of Employment." I know it is a disappointment for our director, Jean Campbell, not to be here to greet you. She is in France for the year with her family, but her ideas and suggestions have been incorporated in the plans for this conference.

As you look around you, maybe you are wondering who is here. The majority of this audience, according to the registration cards, is from southern Michigan. The Detroit suburban communitties and Ann Arbor are well-represented. There are groups from Jackson and further west as far as Benton Harbor, Muskegon, and Grand Rapids; and from other population centers like Lansing, Midland, Bay City and Flint. Of course, most of the women are interested in employment opportunities, but we also have representatives from eleven educational institutions in southern Michigan. Then we have a scattering of visitors from Illinois, Indiana, Ohio, Pennsylvania and Delaware. For example, the United States Civil Service Commission office in Chicago has a representative here. I think the Center for Research on Careers at Harvard University has sent a conference member the longest distance to be with us today, but she is closely rivaled by the representative of the University of Delaware at Newark.

As you can see, our conference is not exclusively for women. The men in the audience may be panelists for the afternoon workshops, or members of the executive committee that advises the Center, or they may be representatives of various organizations or educational institutions, or members of the press.

I am sure that all of you have had enough experience with organizing events to know that a conference is really quite a production. Now that we have you all assembled—a cast of about 270—I would like to give you a few stage directions, so that we can move smoothly from scene to scene. First of all, the conference day begins and ends in this amphitheatre. Our luncheon session is directly across the street in the Michigan League. Two of the afternoon workshops are in the League, and three are in this building, the Rackham Building. A member of the Center's staff will be present at each workshop session, and can be identified by her red carnation. At 3:15, we will all be here for a brief "round-up" and the conference day will be over by 3:30 p.m.

The complete guide to the conference day is the kit of materials which you received at the registration desk. Among the contents, I would like to call your attention first to the array of colored sheets with information about the five afternoon workshops. And there are suggestions about presenting your qualification to a prospective employer in the form of a résumé. We have also included in the kit a participation form for you to fill out if you wish the Center's advice and counsel and have not contacted our office prior to this conference. This brings to an end the preliminary remarks. Now, we are ready to start.

Today, you are guests on the campus of The University of Michigan. We will have an official word of welcome from the head of one of the most important divisions of the University, the Graduate School. Some of you may have been already enrolled in the Graduate School, or you may make decisions about your profession or a future career that will call for consideration of the many graduate programs available here at this university. But for all of us, it is a pleasure to hear the Dean of the Horace H. Rackham School of Graduate Studies, Stephen H. Spurr.

Stephen H. Spurr, Dean of the Horace H. Rackham School of Graduate Studies, The University of Michigan.

In welcoming you to this meeting, I would like to say first of all that I have followed the progress of the Center for Continuing Education of Women with considerable personal interest. Louise Cain, who was responsible for so much of the original planning, is the wife of one of my colleagues in the School of Natural Resources, so I heard a great deal about the preliminary stages of organizing the Center.

Speaking now in behalf of the Horace H. Rackham School of Graduate Studies, I should like to remind you that the University is more than ever a community of adults. During the current year we have about eight thousand graduate students enrolled, with six thousand on the Ann Arbor campus and nearly two thousand more registered for courses on our other campuses and at the five graduate study centers in other major cities.* Nearly forty percent of our students in the University (including the law school) hold the baccalaureate degree, the majority are of legal age, and a substantial number are over thirty.

There are several developments in the Graduate School that may be of interest to you. In an effort to minimize red tape we have revised our admission procedures. Candidates for advanced degrees are now granted regular admission if they are fully qualified, or tentative admission if they must meet specified conditions to continue after a term or a year. Students who wish to elect graduate courses for credit, but who are not degree candidates, may be admitted as special students on a simplified application. Finally, holders of the doctorate who wish to use the facilities of the University but who do not wish to elect courses for credit may be admitted as Visiting Scholars. We anticipate the tentative admission in the Graduate School will be used in the future in many cases where unclassified admission in the undergraduate College of Literature, Science, and the Arts was formerly employed. This change is expected to simplify procedures for many students who formerly had to deal with both the graduate and undergraduate divisions when their admission status was not clear.

Second, we are exploring the establishment of a Candidate's degree, intermediate between the master's and the doctor's, designed for those who do not wish to prepare a doctoral dissertation. We believe this to be a positive step, replacing the present negative "all-but-dissertation" situation, and preparing the recipient for teaching positions in colleges and junior colleges as well as for other important professional posts. Our proposal is similar to the new Master of

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*Graduate Study Centers are located in Detroit, Flint, Grand Rapids, and Saginaw.

Philosophy degree at Yale and the proposed Doctor of Arts degree at Berkeley. Early reaction across campus and from other universities has been most favorable. At the present time, we are planning to issue a Candidate's Certificate to those who are admitted to candidacy for the doctor's degree each term.* We shall delay any recommendation on substituting a degree for the certificate until we can gauge the acceptance of our innovation.

Michigan is a big institution, but we hope that it is not an impersonal one. In the Graduate School we are making every effort to create an interested and personalized service agency for our most important client, the graduate student. Come in and try us.

Helen Hornbeck Tanner:

Dr. Eva Mueller, our keynote speaker, is a well-known economist. She received her bachelor's degree from Smith College, a master's degree from New York University, and a doctor's degree from Harvard University. She is a professor of economics at The University of Michigan and a Program Director in the area of consumer behavior at The University's Institute for Social Research.

Here on the campus, her competence is widely admired. She has attained national and world-wide recognition as well. She has been a consultant for economic survey programs of the National Council of Applied Economic Research at New Delhi, India. This fall, she will undertake the same assignment, adding to it the job of Senior Program Economist for the United States Agency for International Development in India.

Today, Dr. Mueller will analyze an aspect of the United States economy, providing us all with sound factual background for realistic discussion in the afternoon workshops. Her subject is, "Women in the Labor Market."

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*At The University of Michigan commencement exercises on April 30, 1966, Candidate's Certificates were awarded to 164 graduate students, marking significant achievement in route to earning a regular doctoral degree. Deans of Big Ten institutions at their spring meeting unanimously agreed to provide recognition of the Candidate's status.

WOMEN IN THE LABOR MARKET

by Eva L. Mueller

It is a pleasure to be able to open this conference on an optimistic note. I firmly believe that there are growing opportunities for educated women in the labor market. This is not just a vague and hopeful prospect. There are a number of good reasons for believing that jobs suitable for well-trained women will become more and more abundant.

In the first place, there is now a shortage of qualified men in a good may professional fields. Inevitably this will make those who hire and who formulate personnel policy increasingly receptive to the employment of women, and probably also to the employment of part-time workers.

A second factor in favor of the well-trained is the direction of growth in labor demand. Our affluent society is spending an increasing proportion of its income on services rather than goods. Prominent among these services are health, education, social welfare and recreation. Also expanding rapidly are the distributive trades - selling and advertising - and the financial industries which handle our savings - banks, insurance companies, brokerage houses. Of declining importance as far as employment is concerned are first of all agriculture, secondly mining, and last - but not least - manufacturing. This decline in the goods producing industries reflects in part patterns of consumer demand. For example, our desire for more food does not rise in proportion with our incomes. It also reflects technological advances which permit the same number of people, working with the most modern machinery, to turn out an ever rising volume of goods. Automation is eliminating routine jobs which require frequent repetition of the same operation in both white-collar and blue-collar occupations. Thus there will be expanding opportunities for the woman who is well-trained, but fewer openings for those who want to do manual work or white-collar jobs which require no specific preparation, skills, or training.

My third reason for being optimistic about your prospects is that some of the barriers, which in the past have restricted the employment of women, are gradually giving way. In a good many occupations and in a good many firms which still employ very few women, and which particularly have resisted part-time employment, the share of women in the total of available jobs is bound to rise in the years ahead.

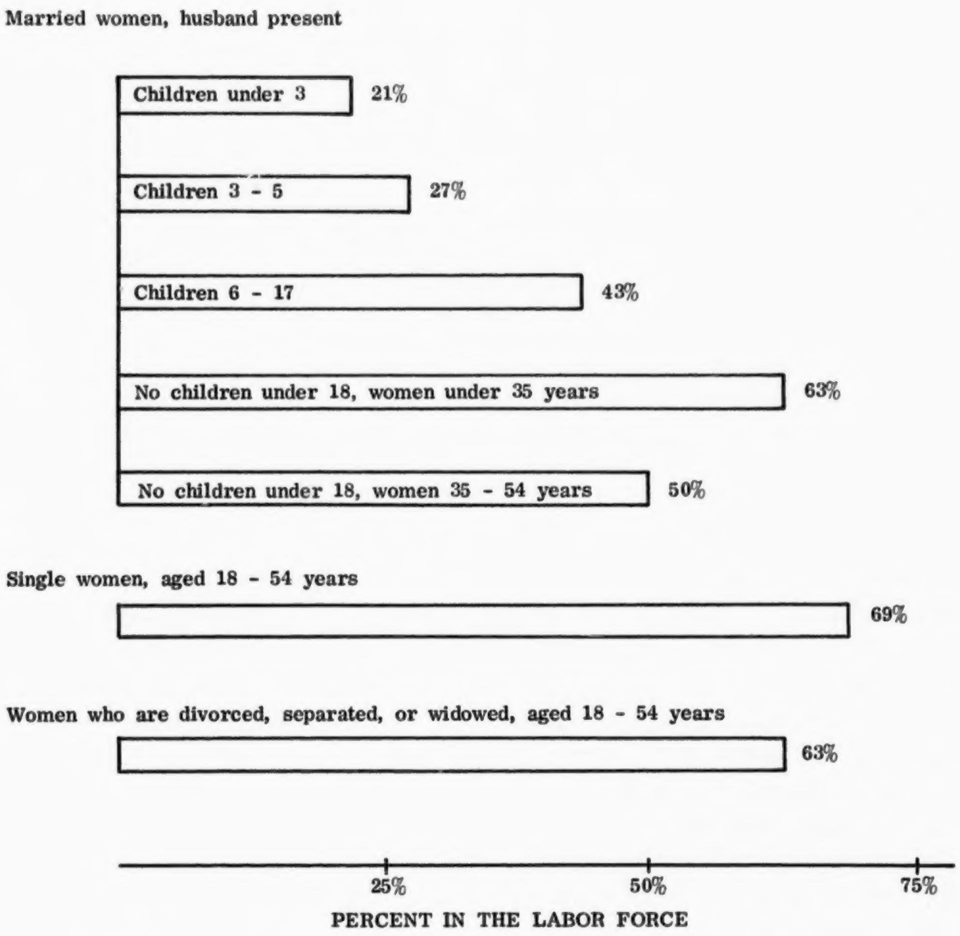
This last statement implies a challenge as well as an opportunity. The kind of job some of you want may not be waiting for you, in spite of the active demand for skilled and educated people. In most cases it will not be handed to you on a silver platter. If you want to be a full-time teacher, a full-time nurse, or a full-time librarian, you will find the doors wide open to you. If you have other preferences, you may not find yourself welcomed so enthusiastically. This is where the challenge lies. Some barriers will confront you, but they are no longer firm. It will be up to you to overcome them.

Let us now look at the facts. What is the position of American women in the labor market? The first observation to be made is that many more women work than ever before. At present every third woman is a member of labor force. In 1940, 24 percent of women worked; in 1950 it was 27 percent; now it is 33 percent. Most of the increase in the employment of women in the past 25 years is due to the entry of married women into the labor market. Labor force participation depends first of all on a woman's age, marital status and age of children (Chart I). About three-fourths of single women under 55 work. Nearly two-thirds of divorced or widowed women under 55 work. Among married women labor force participation is fairly infrequent when there is a pre-school child in the household, but increases sharply as the children grow up. Half of all married women over 35 with no child under 18 in the household now are in the labor force.

Labor force particiaption of married women also is strongly influenced by their age and education, as Chart II illustrates. The chart shows that married women are least likely to work when they are under 35. This is of course the period when there are young children in the household. There is more labor force participation in the 35-44 age group and then a sharp increase for ages 44-54. By this time the children normally have grown up. In the 55-64 age group fewer women now work than in the 45-54 age group. The oldest group includes many women who grew up at a time when working before the birth of the first child was less common than it is now. Not having worked in their younger years, some of them are understandably reluctant to

CHART I

LABOR FORCE PARTICIPATION RATES FOR WOMEN VARY WITH AGE, MARTITAL STATUS, AND AGE OF CHILDREN



Source: U. S. Department of Labor

seek employment later.

Chart II also reveals that education has an even greater influence on labor force participation than age. In every age group the likelihood that a woman works increases sharply with education. The largest jump in labor force participation occurs with the completion of four years of college. Among married women who are college graduates, over 40 percent work in the 18-34 year age group and this rises to 60 percent for the 45-54 year olds.

Why do so many married women work? The reasons are clear—money and personal satisfaction. In many cases both motivations are present, and it is fruitless to try to determine which is the more decisive. Among women with young or with school-age children, labor force participation is higher, the lower the husband's income. This indicates that financial reasons do play an important role in most cases where a young mother enters the labor force. Among women who no longer have a child under 18 in the house, labor force participation is quite unrelated to the husband's income. Middle-aged women in comfortable financial circumstances often work to help finance the college education of their children. In addition there seems to be a large group of middle-aged and older women who work primarily for the personal satisfaction they may derive from a job.

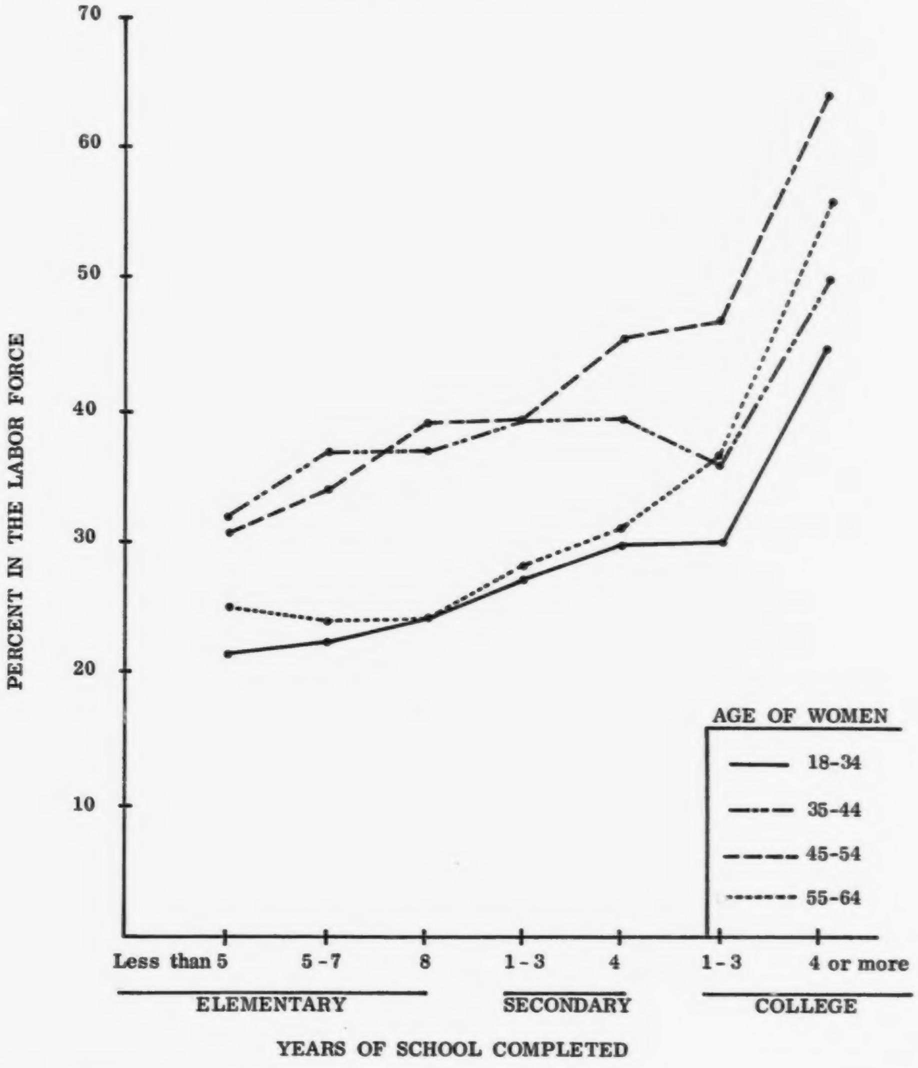
What kind of work do women do? What jobs are available to them? Women's occupations differ considerably from men's occupations. Women are more likely than men to have white-collar jobs. The largest single women's occupation is clerical and secretarial work; while the largest occupational groups for men are craftsmen and skilled or unskilled production workers. As Chart III indicates service work is the second largest occupation among women. This includes work in restaurants, hotels, beauty parlors, laundries, dry cleaning establishments and the like. Factory and professional work tie for third place.

The amount of education obtained by a woman strongly influences the kind of job she will obtain. Chart III illustrates this very clearly. Among women with 1-3 years of college, clerical and professional occupations dominate much more strongly than in the female labor force as a whole. Indeed 40 percent of women in that group have clerical and secretarial jobs and another 28 percent have professional jobs.

CHART II

LABOR FORCE PARTICIPATION RATES FOR MARRIED WOMEN VARY WITH AGE AND EDUCATION

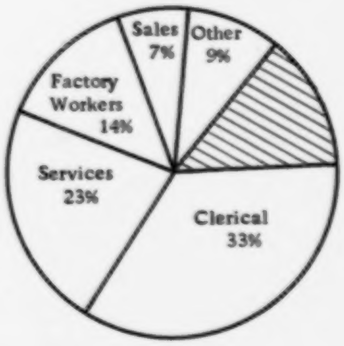
(married women, husband present)



Source: U. S. Department of Labor

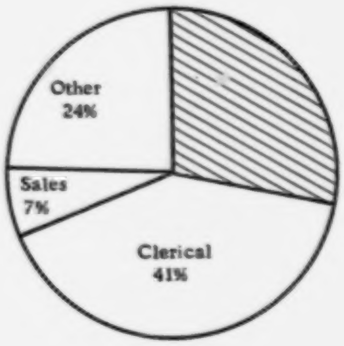
CHART III

MAJOR OCCUPATIONS OF WOMEN



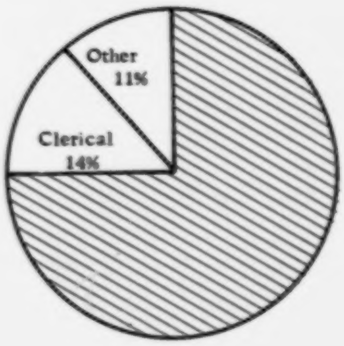
All Educational Levels

Professional 14%



1 - 3 Years Of College

Professional 28%



4 Years Or More Of College

Professional 75%

Source: U. S. Department of Labor

Then, when you look at employed women who have finished four years of college, professional work is three times as frequent as all other occupations combined. Twenty-five years ago girls graduating from college were advised to take a secretarial course, else they might not find an entry into the business or professional world. Today the picture has changed drastically. Only 14 percent of women with a college degree are doing clerical or secretarial work.

What are the professional jobs which women hold? Chart IV shows the distribution of college educated women in the professions. Women with 1-3 years of college are highly concentrated in two occupations - elementary school teaching and nursing. Nearly two-thirds of professional women with 1-3 years of college are in these two professions. A few others are music teachers, medical and dental technicians, or accountants; but other openings in the professions, though quite impressive in absolute numbers, absorb only a very small proportion of that group.

Women college graduates likewise are concentrated in a small number of occupations which traditionally have been thought of as "women's occupations." Elementary school teachers are by far the largest group among college graduates in the professions. Secondary school teachers follow, while nurses are third. Over two-thirds of women college graduates in professions are in these three kinds of work. A very much smaller proportion are college professors (usually in women's colleges), librarians, music teachers, and social workers. All other professions employ a negligible proportion of women college graduates.

The employment pattern of men in the professions is very different from the employment pattern of women. Only 16 percent of male college graduates in the professions are teachers, compared with 65 percent of the women. On the other hand, 46 percent of male college graduates doing professional work are engineers, natural scientists, doctors, lawyers, judges, pharmacists and clergymen. Women can be found in all these occupations. There were in 1960, 15,00 women doctors in the U.S., 7000 women engineers, 8000 women lawyers and judges, and 15,000 natural scientists. Yet this group of occupations which absorbs 46 percent of male college graduates absorbs only 2.3 percent of women college graduates who are in the labor force. Thus one might

CHART IV

DISTRIBUTION OF PROFESSIONAL JOBS AMONG COLLEGE EDUCATED MEN AND WOMEN

	Women		Men	
Profession	4 Or More Years Of College	1-3 Years Of College	4 Or More Years Of College	1-3 Years Of College
Teachers	65%	37%	16%	4%
Professional nurses	6	31	*	*
Music and art teachers	5	5	2	4
Social and religious workers	4	3	1	1
Librarians	3	2	3	*
College professors	3	*	5	1
Editors and reporters	1	1	1	2
Personel and labor relations workers	1	1	1	2
Accountants and auditors	1	3	7	13
Medical and dental technicians	1	4	*	2
Physicians and pharmacists	1	*	10	3
Natural scientists and professional engineers	1	1	23	22
Engineering and physical science technicians	1	2	2	19
Lawyers, judges, and clergymen	*	*	13	5
Other	7	10	16	22
	100%	100%	100%	100%

* Less than one-half percent.

Source: U. S. Census 1960

label these professions as men's occupations and label elementary school teaching, nursing, and library work as women's occupations. In between are a few fields where men and women share the available jobs more nearly equally, notably secondary school teaching, editorial work and reporting, personnel and labor relations work, social and religious welfare work, and the jobs of medical and dental technicians.

To be sure, these occupational differences arise in part out of women's natural inclination to work with children and help the sick. But the differences also reflect two other problems: first, the greater persistence of men in pursuing lengthy professional training in highly demanding and technical occupations and secondly, the difficulties which even well-trained women experience when they try to gain a foothold in these fields.

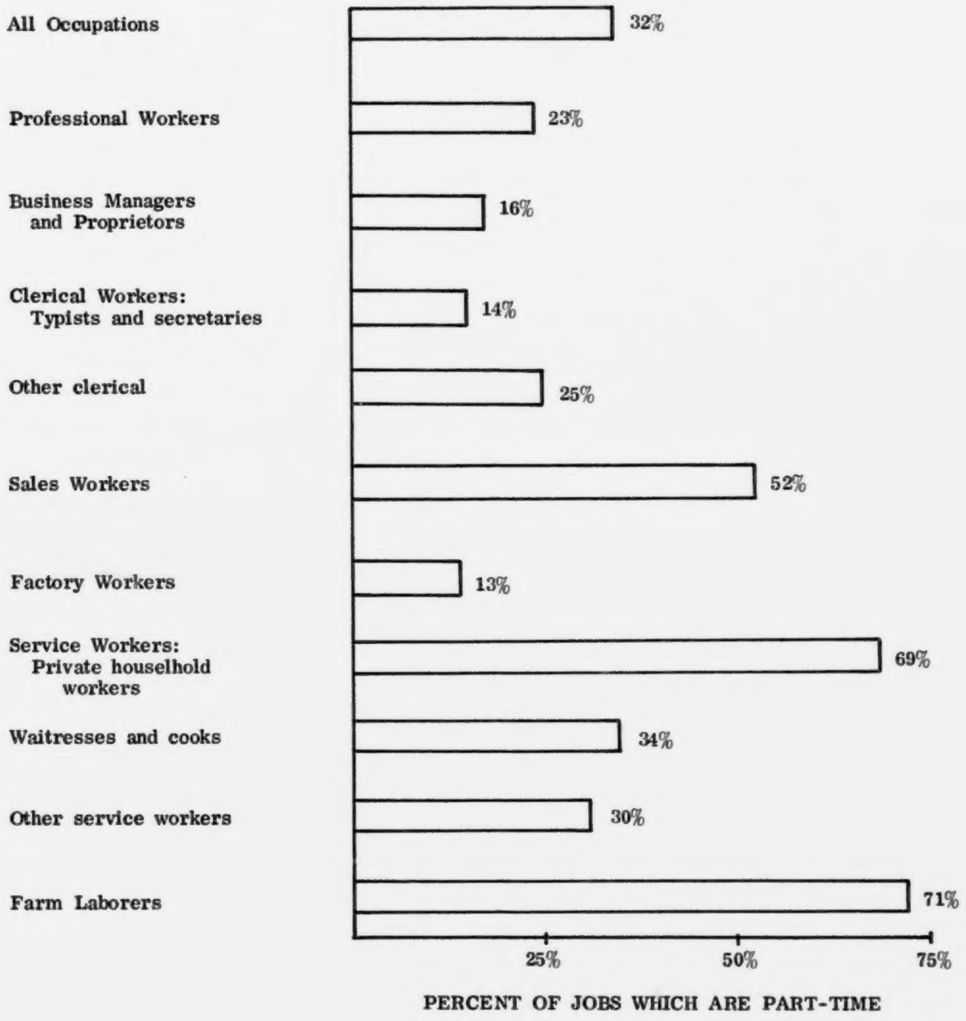
A great many of the married women who enter the labor force would prefer to work only part-time. Yet the majority have to choose between working full-time or not working at all. In most occupations the labor market has not yet adapted itself to the needs of the woman who wants to combine marriage and work and who wants to do justice to both roles. In 1963 the U.S. Bureau of Labor Statistics asked a large sample of married women who had entered the labor force in the previous year whether they preferred to work full-time or part-time. About half said they preferred part-time work, the other half full-time work. Altogether nearly two-thirds of these women ended up working full-time, a significantly higher proportion than had expressed a preference for full-time work. There may have been many others who failed to find part-time work and decided to stay at home rather than accept a full-time job.

Only about a third of all women who are in the labor force have worked part-time in recent years. This proportion is about the same for married and for unmarried women. If we exclude teen-aged girls, the proportion of women who work part-time declines to one-fourth. Since many of you may be interested in part-time work, let me show you how the availability of part-time jobs varies between occupations. Chart V indicates that part-time jobs are most plentiful in the occupations in which most of you are least interested. For example, 71 percent of women who worked as farm laborers were employed part-time. Similarly 70

Source: U. S. Department of Labor

CHART V

WHERE ARE THE PART-TIME JOBS FOR WOMEN?



percent of women who worked in private households as cleaning women, cooks, baby sitters, and the like worked part-time. Part-time work also was frequent among sales workers; that is, clerks and cashiers in stores, and among service workers, especially waitresses. Indeed two-thirds of all part-time jobs held by women were in these few occupations. In the professions, in clerical work, in business management, and in factory work somewhat less than one-fourth of the jobs available to women have been part-time.

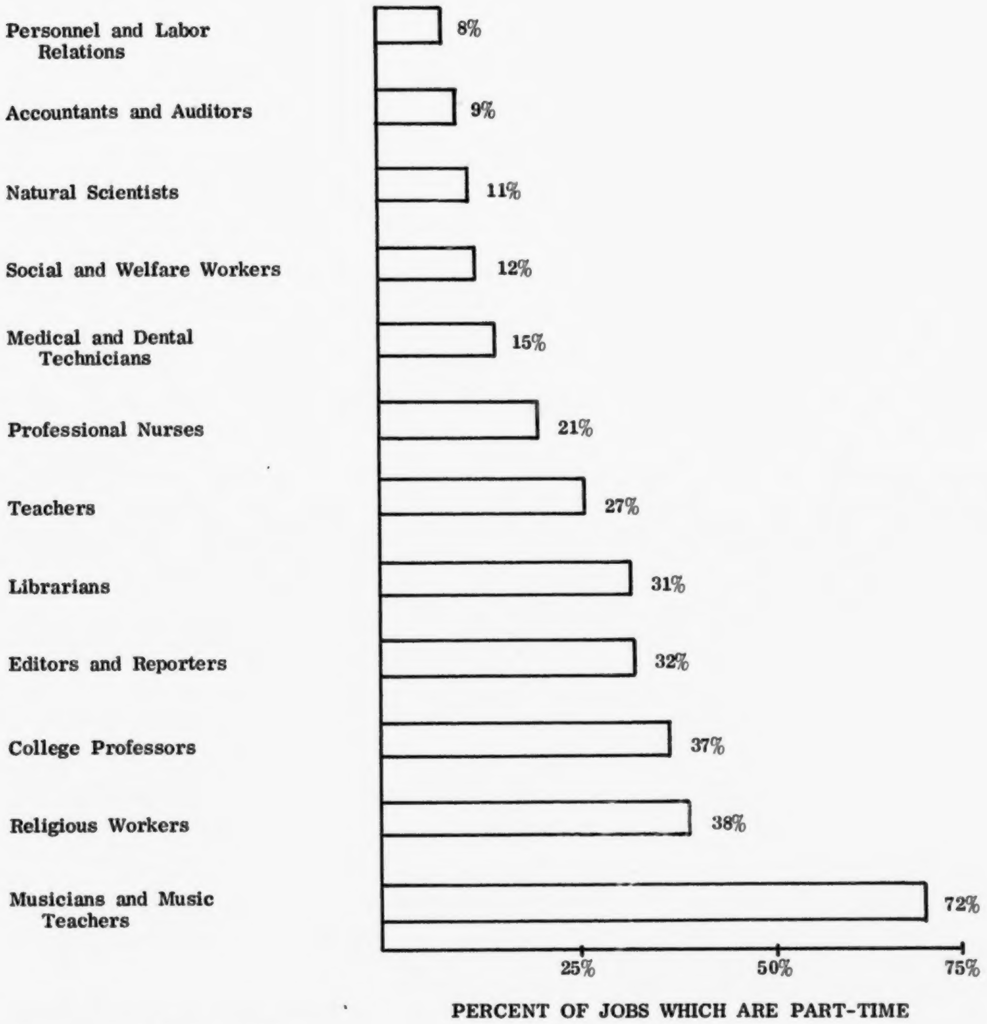
Chart VI enables us to look at part-time proffessional jobs in more detail. You see that very few of the women who are in personnel or labor relations work have part-time jobs. The same is true for accountants, auditors and bookkeepers, natural scientists, social and welfare workers, and medical and dental technicians. In the three fields where professional women are most commonly employed - teaching, nursing, and library work - between a fifth and a third of the jobs held by women are part-time. The proportion is somewhat higher still for college teachers and religious workers. And finally there is one professional field where women work predominantly part-time, namely when they give music lessons.

These figures may be disappointing to those of you are interested in part-time work. Let me add an optimistic note. If one looks at the trend over the past 15 years, one finds that the number of part-time jobs available to women has risen significantly in absolute numbers and also in proportion to all jobs held by women. Between 1950 and 1963 the number of women who worked part-time rose from 6 million to 10 million or by about 66 percent, while full-time employment of women rose by only 28 percent. However, the large increase in part-time women workers is brought about in part by teen-age and college girls who do some work while going to school. Still, it appears that the labor market is adjusting itself to the need of married women for part-time work, although the adjustment so far has been gradual and no doubt insufficient.

One hears a good deal about the possibility of a 30 hour workweek in the future. The fact however is that in the last 15 years the average length of the full-time workweek has not declined significantly in most occupations. It remains between 36 and 40 hours a week. Such surveys of people's

CHART VI

THE AMOUNT OF PART-TIME WORK AVAILABLE FOR WOMEN DIFFERS AMONG THE PROFESSIONS



Source: U. S. Census 1960.

attitudes toward the length of the workweek as I have seen indicate no widespread preferences for a shorter workweek. The results are of course dominated by the attitudes of male workers. They prefer to work more and earn more. Institutional changes seldom occur, if they are not desired by the people concerned. Only massive unemployement might change these attitudes in the near future.

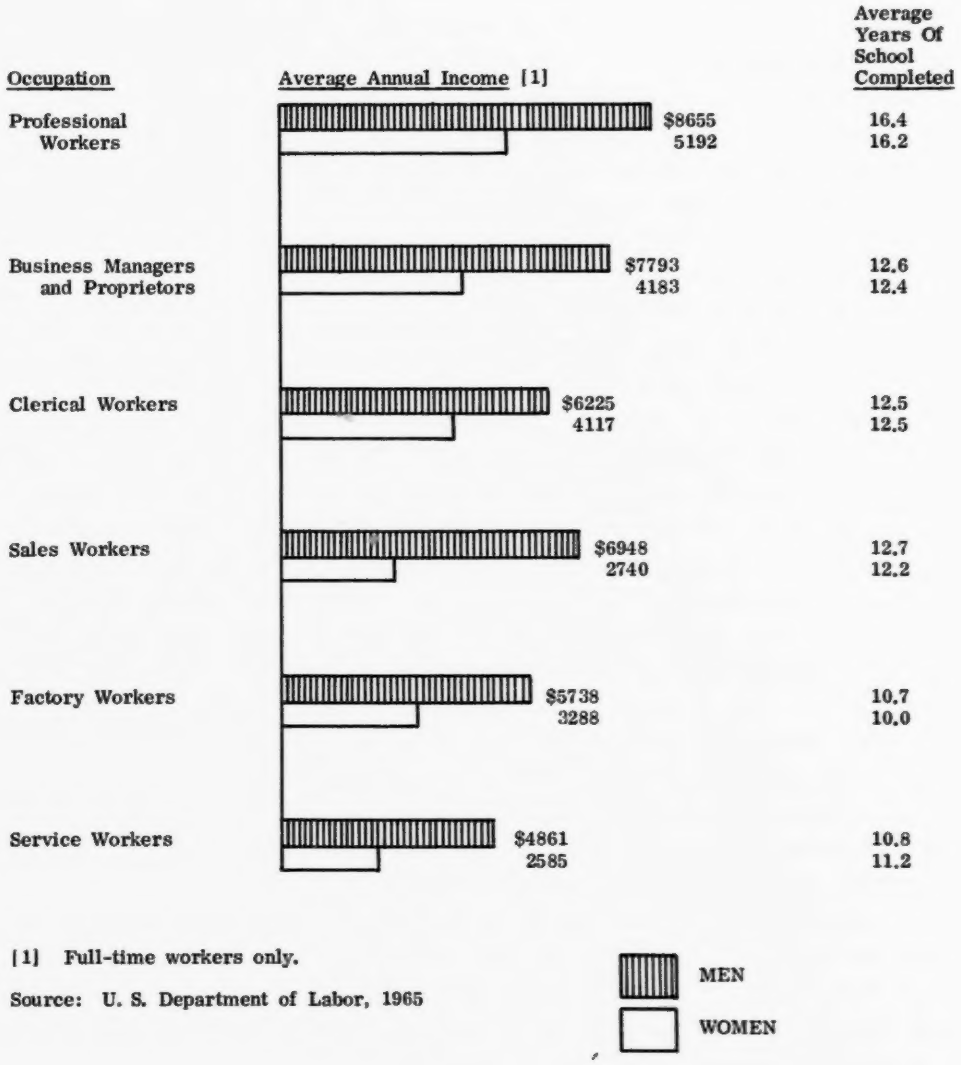
Next we may look at the incomes which men and women earn in different occupations. These figures are of interest because they illustrate in a sense the comparative valuation which the labor market places on men's and women's work. Chart VII shows that in all occupations men earn on the average at least 50 percent more than women, and in some occupations they earn 70 to 80 percent more. Chart VII shows on the right hand side the average number of years of school completed by men and women in each occupation. We find that in every occupational category women workers have just about the same amount of formal education as men workers. Thus we must look elsewhere for an explanation of the observed pay differentials.

Such studies as have been done to compare the performance of men and women on the job usually draw very favorable conclusions about the quality of women's work. However, studies of absenteeism almost invariably reveal that absenteeism is higher among women employees than among men. Employers complain that women periodically enter and leave the labor force, working for a time and then again putting family obligations first.

Of all the women who worked in 1963, either full-time or part-time, less than half worked all year around. In some cases working less than the full-year no doubt was involuntary. That is, it was due to unemployment or illness. Also in the group or part-year workers are women who work seasonally, say in a store before Christmas and Easter or in agriculture during the harvest season. But a major reason why so many women work less than a full year is that for various family reasons they alternate between working and not working. Part-year work is particularly common among married women in the labor force between the ages 25 and 44. In 1963, for every married womean who worked full-time all year, there was another married woman who worked full-time part of the year only. In the 45-64 age group this

CHART VII

WOMEN EARN LESS THAN MEN WITH THE SAME EDUCATION



[1] Full-time workers only.

Source: U. S. Department of Labor, 1965

ratio rises to two to one in favor of year around work; but for men it is five to one. The pattern of temporary labor force participation on the part of married women often is unavoidable, given the needs of children, husband, and home. Yet, from the employer's point of view, it has negative implications. It means that women do not build up the same experience on the job as do men, who work more steadily.

Chart VIII illustrates this point. It shows the average number of years men and women have been on their present job. In every age group above 35, we find that men have been about twice as long on the job they are now holding as have women. Thus they have twice as much experience on the job. Or to put it the other way around, when an employer hires a man, on the average the chances are that he will stay twice as long as a woman who might be hired in his place.

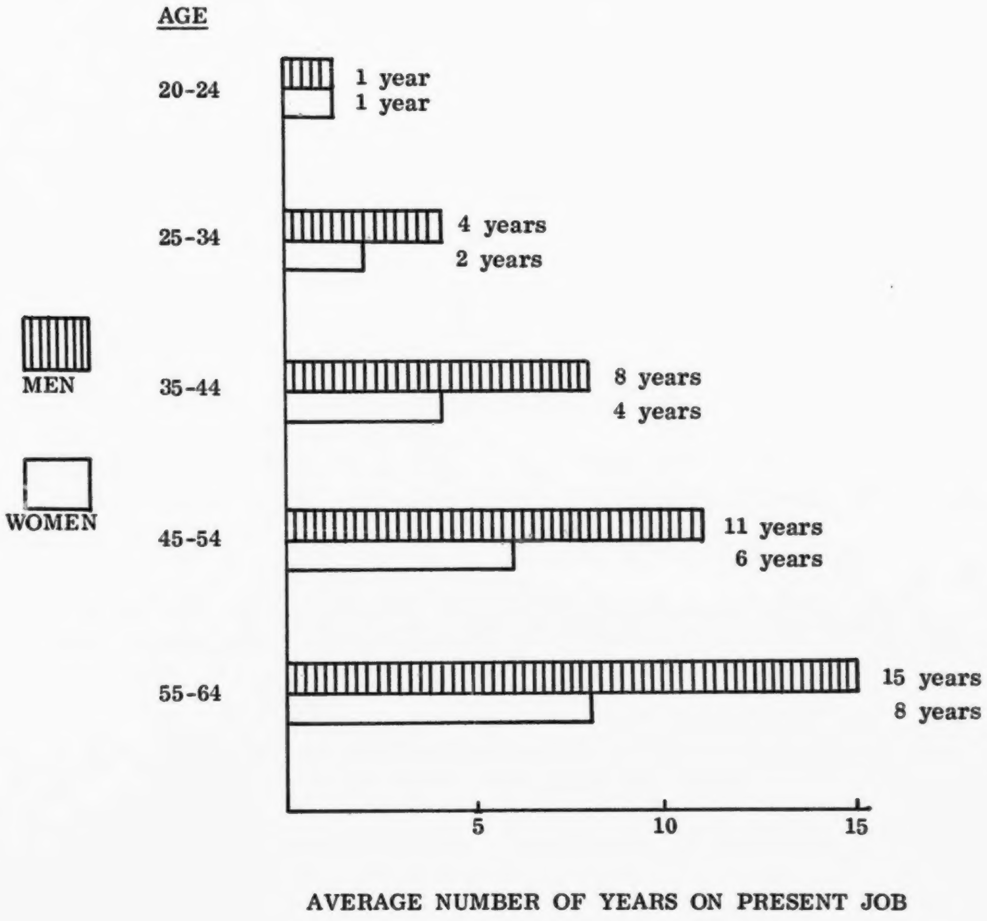
The high turnover rate among women also implies that it may be more advisable to entrust to men the responsibility which goes with the higher level jobs and the supervisory grades within each occupation. The Commission on the Status of Women appointed by President Kennedy found that in business well-prepared women often are passed over in favor of men for posts that lead into management training programs and subsequent exercise of executive responsibility.

The U. S. Department of Labor reports that "the proportion of women is usually much smaller in the upper levels of an occupation than in the occupation as whole - even in their traditional fields of work. For example, in the library field, women fill a very large proportion of the staff positions, but a very small proportion of the administrative positions . . . In elementary schools, almost nine-tenths of the teachers, but only half of the principals, are women. In secondary schools, where women fill about half the teaching positions, they were reported in 1955-56 as comprising about 9 percent of the principals in junior high schools and about 5 percent in senior high schools."

Chart IX relates to service in the Federal Government of the United States, where there is an official policy of equal opportunity for men and women. Nevertheless most women working for the Federal Government have been in the lower civil service grades. This chart was prepared for the

CHART VIII

MEN STAY LONGER ON EACH JOB

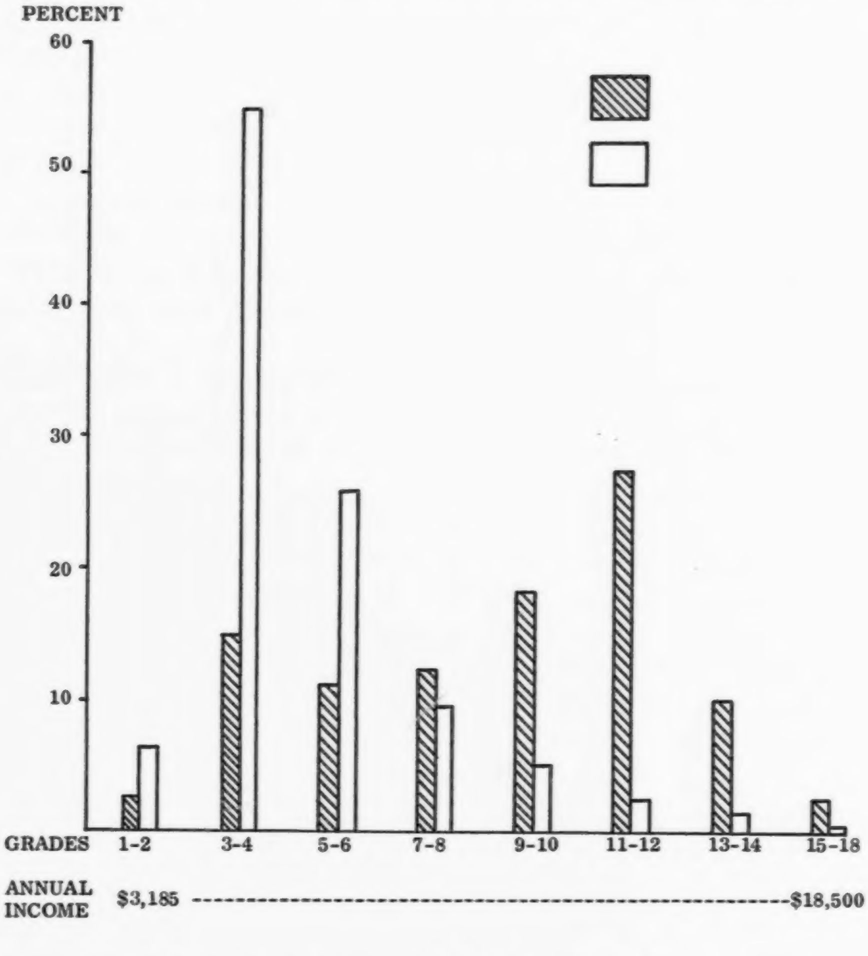


AVERAGE NUMBER OF YEARS ON PRESENT JOB

Source: U. S. Department of Labor

CHART IX

MOST WOMEN IN FEDERAL SERVICE HAVE BEEN IN THE LOWER GRADES



Source: Report of the U.S. President's Commission on the Status of Women

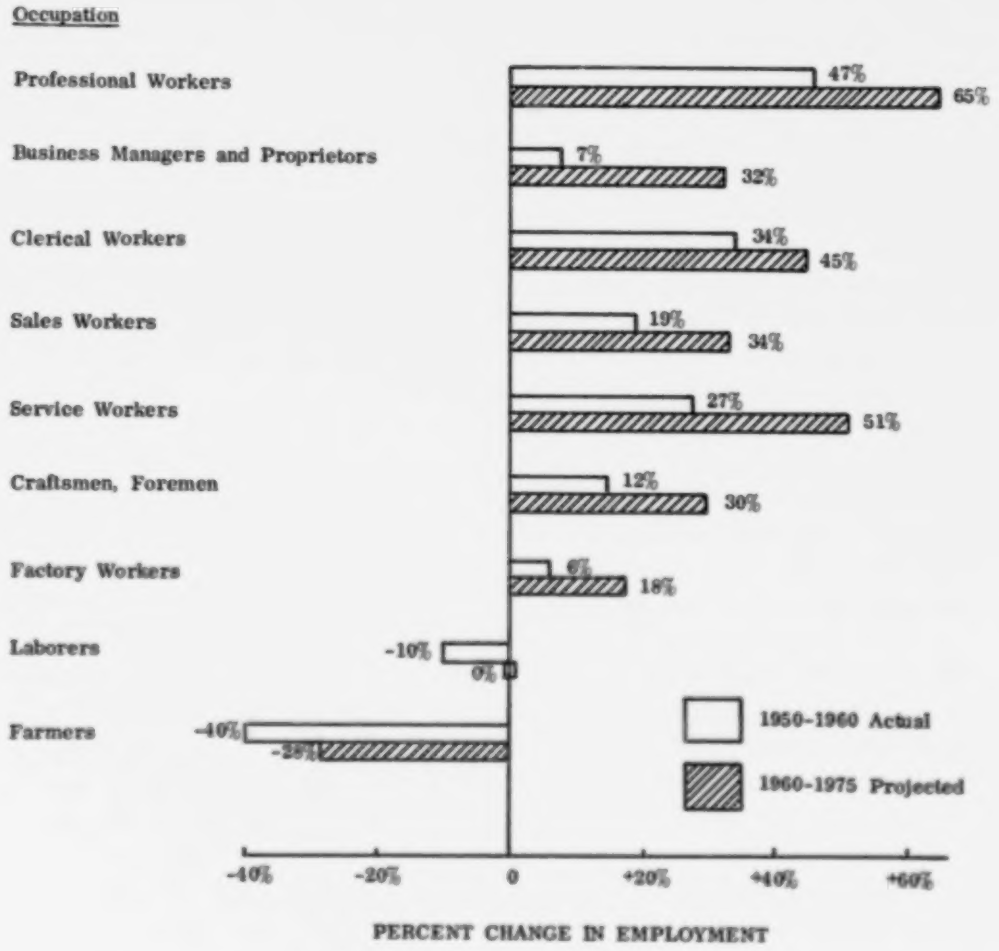
President's Commission on the Status of Women and was included in the Commission's Report. The Commission concluded that "though women are represented in the highly paid professions, in industry, in business, and in government, most jobs that women hold are in low-paid categories." Needless to say, the Commission recommended some government action to insure more equal opportunities for women. Recently, for the first time a federal law prohibiting discrimination in employment against women was passed as part of the Civil Rights Act. Efforts to improve the present situation will gradually bear fruit and will make it easier for you, and women like you, to find the kind of work which utilizes your training and ability to your own satisfaction. Yet the point should also be made that if you are unable or unwilling to work regularly, you may have content yourself with a job which may not quite measure up to your ability and aspirations.

The final question I want to discuss is - What kinds of jobs will be available to college-educated women in the next 10 years? To speak about the future is always intriguing, but also hazardous. To know how many more jobs will be available for women 10 years from now in each of a long list of professional occupations no doubt would be very useful to you. But to arrive at such a forecast one has to make three successive estimates: first, one has to estimate the magnitude of the increase in demand for various goods and services 10 years from now; secondly, one has to estimate to what extent advances in technology and automation will reduce the manpower needed to produce a given amount of goods and services; and finally, one would have to estimate how the projected job openings will be divided between men and women. All this would be largely guesswork. For that reason no detailed or precise estimates of future job openings are available.

Yet a few things can be learned: For one thing trends which have prevailed in the recent past are bound to have some continuity and may persist into the future. Chart X shows the percentage change in major occupational categories which actually took place form 1950 to 1960 and further change which the U. S. Department of Labor predicts for the 15 years form 1960 to 1975. It relates to all jobs, regardless of the worker's sex. Farming showed a very large de-

CHART X

PROFESSIONAL JOBS HAVE THE HIGHEST
PAST AND EXPECTED FUTURE GROWTH RATE



Source: Manpower Report of the President.

cline from 1950 to 1960, and this downward trend is expected to continue because of the great strides that are being made in agricultural productivity. Industrial workers also have declined as a proportion of the working population, as automatic equipment has replaced unskilled and semi-skilled workers. This trend will hardly be reversed. The largest growth in employment within the blue-collar group has been and will be experienced by skilled workers. The continuously growing need for mechanics and repairmen to install and maintain the ever increasing amount of complex equipment used by industry, government, and households is a major factor here. The number of service workers in the labor force rose sharply from 1950 to 1960; and the demand for this kind of worker is expected to show increases well above the average for the labor force in the years ahead. The very large increase in clerical worker employment in the recent past is expected to accelerate in the future. This increase is related to the growing volume of communications, record keeping, and paper work in our society. It also occurs because, as occupational functions become increasingly specialized, paperwork formerly done by businessmen, professionals, and sales workers is transferred to clerical workers. This trend is only partly offset by the increasing use of labor saving office equipment.

The professional group increased by 47 percent from 1950 to 1960, being by far the fastest growing occupational field. And demand for professional workers will continue to grow much faster than overall labor demand in the next decade. Chart XI shows the growth from 1950 to 1960 in important professional categories. Unlike the previous Chart it relates to jobs held by women only. We see that the largest increases in professional jobs for women occurred among recreation workers, in the personnel and labor relations field, among medical and dental technicians, in the technical grades in the physical and engineering sciences, as well as among editors, reporters, and accountants. These are fields where women have recently gained new ground. There also was a substantial increase in job openings for women in elementary school teaching, nursing, and music teaching - the more traditional female occupations.

When it comes to the next ten years I cannot give you exact figures, nor can I anticipate what proportion of jobs

CHART XI

THESE ARE THE MOST RAPIDLY EXPANDING FIELDS FOR WOMEN IN THE PROFESSIONS

Profession	Increase 1950-1960
Recreation Workers	132%
Personnel and Labor Relations Workers	105
Medical and Dental Technicians	104
Other electrical, engineering, physical science technicians	56
Elementary School Teachers	51
Professional Nurses	47
Librarians	46
Accountants and Auditors	43
Editors and Reporters	42
Musicians and Music Teachers	42
College Professors	36
Physicians	33
Secondary School Teachers	25
Artists and Art Teachers	22
Religious Workers	22
Lawyers and Judges	19
Social Workers	17
Dietitians	15
Natural Scientists	10

Source: U. S. Census 1960.

in each profession will be filled by women. Personnel needs are expected to rise significantly in every professional field, but the gains will be far from uniform. The U.S. Department of Labor predicts that teaching, the largest profession, will grow only moderately in the years ahead compared with other professional occupations; but in absolute numbers the increase will of course be important. Openings for college teachers will rise more sharply than openings for elementary and secondary school teachers as a sharply rising fraction of young people go to college. There will be new teaching opportunities in the rapidly growing community colleges. Some of the most acute shortages of professional workers may be found in the health field, ranging from nurses, medical technicians, public health workers and medical researchers to doctors and dentists. The limitations of training facilities will make it likely that these shortages will persist for quite some time. In engineering and the natural sciences employment requirements are estimated to rise very sharply in the next 10 years, especially for scientists and engineers with advanced graduate training. Closely related is the rapidly growing demand for technicians, both in the physical sciences and in the medical field. The U.S. Department of Labor predicts that the demand for such technicians may grow by 60-70 percent in the next 10 years. Shortages of scientists, engineers, and doctors lead to emphasis on improved utilization of their services. This leads to efforts to relieve these key people of tasks which can be performed by less highly trained persons, such as technicians. The mounting demand for technicians also reflects the complexity of modern technology, which continuously creates needs for workers who have some basic scientific, mathematical, or medical knowledge or training in some specialized aspect of technology such as computer programming. Some increased emphasis on social scientists and social welfare workers may be emerging from President Johnson's Great Society programs.

It is difficult to be more precise than this about the employment opportunities which are open to you. Undoubtedly, in every profession there will be more jobs for women than ever before. Whether you can get the kind of work you really want, at an equitable rate of pay, and with the kinds of hours you want depends on what you bring to the job.

What matters above all is your education and training and the additional competence you gain with experience. Because you want to work only part-time, or because of your age, or because you are a woman you may be asked to start lower on the professional ladder than a young man with the same educational qualifications. You may have to put up with that at the outset in the hope of convincing your employer later that you deserve better. The obstacles which face you are no longer irremovable. You will have more chance of finding a slot in the working world that satisfies you, if you can keep absences to a minimum, ask for no special privileges, and keep your employer's needs in mind. By doing this, you will also help other married women who may come after you. You must be willing to fight for the next promotion and be qualified for it.

Mark Twain said that everybody talks about the weather but nobody does anything about it. You can do something about the climate in which you and other women work. How many and what kinds of jobs will be available to married women depends, in part at least, on you. And in this affluent society you will suffer no hardship, even if you are at some disadvantage; it's fun to face a challenge.

Helen Hornbeck Tanner:

While we were preparing for this conference, we became increasingly aware that most mature women prefer - and indeed may be restricted to - part-time employment. Currently, one of the significant experiments in this field is being conducted by the U.S. Atomic Energy Commission under the sympathetic guidance of Arthur L. Tackman, Director of Personnel.

Working for the government, and with extensive educational background and business training, Mr. Tackman has a broad view of the employment scene. His degrees are from Ohio State University, a bachelor's degree in political science and public administration and a master's degree in business administration.

We are very pleased that he is here to give us a first hand account of his experience with this original program. One of the "alumnae" of the part-time program, Mrs. Eve

Duff, is also here for the conference, and many of you will have an opportunity this afternoon at the workshop sessions to talk with her as well as with Mr. Tackman.

PART-TIME PROGRAM FOR PROFESSIONALLY TRAINED WOMEN

by Arthur L. Tackman

It is indeed a pleasure and a privilege to have this opportunity to talk with you about a program which, although small in size and young in experience, may be an exciting and significant step in a renaissance involving the employment opportunities of women.

In approaching my subject today, I feel like the little country girl on her first trip to the big city. She went into a large department store, and at the perfume counter she saw such items as My Sin, Aphrodisia, Midnight Passion and the like. Finally she asked the saleslady: "Haven't you got anything for a beginner?"

So, although I feel like a beginner on the subject of part-time employment for professional women, it is an important area and I would like to discuss the Atomic Energy Commission's program with you in some detail.

First, let's examine management's interest and motivation. Why should the Federal Service -- the nation's largest employer -- be interested in hiring women? More specifically, why is the AEC interested in this matter?

AEC has two primary reasons - need and numbers.

1. Need.
   AEC needs a continuous supply of professionally trained employees. Sixty-four per cent of all our employees have college degrees - a high percentage for a Government agency.
2. Numbers
   Because of our needs, we are aware of numbers of professionally trained people. A few years ago AEC became aware that less than half of the American women with four years of college training were in the labor force. This at a time when employment rates were high

and when highly educated employees were in great demand.

In 1963 the Labor Department reported that 206,000 women received bachelor degrees. About 80 per cent of these women entered the labor market. In the next ten years - when our 1963 graduates reach the 25-35 age bracket - almost half of those will leave the labor market. When the Class of '63 gets to be about age 45, more will be working again, but, if things stay as they are today, no more than 68 per cent of them will ever work again. Discounting those women who by choice or necessity will never seek paid employment, there is still a sizeable untapped resource of educated women. Statistics also inform us that only 3 out of 5 employed women work full time all year. As the Women's Bureau of the Labor Department reported in January, 1966, ". . . women are more likely to want to work part-time or part year." The major reason given by women for preferring this type of employment was the responsibility of their homes. Now we might raise one further question which I think is important: "To what extent would the opportunity to work part-time and to become reacquainted with their professional skills encourage women to make adjustments in their home responsibilities and return to full time careers"?

The Chairman of the Civil Service Commission wrote to the heads of all departments and agencies and asked that they review their agencies' personnel polcies and practices in view of the President's interest that the employment and advancement of women be explicit and effective.

When the President presented the Report of the Commission in October, 1963, he noted: ". . . . I see thousands of women getting out of colleges every year and I wonder what happens to all these skills, what contributions do they make, what chances do they have to make full use of their powers. . . ."

We also noted the following comment in the Report by the Commission on the Status of Women: ". . . .Where the Federal Government is itself the employer, its hiring and promotion practices can become a showcase for equal employment opportunity without discrimination of any kind. . . One of our remaining concerns has to do with part-time employment . . . Many able women, including highly trained professionals, who are not free for full time employment can work part time. The Civil Service Commission and the Bureau of the Budget should facilitate the imaginative and prudent use of such personnel throughout the Government Service . . ."

The part-time employment of women has long been recognized by departments of the Federal government as a means to (1) meet peak workload requirements, (2) to cut costs on routine or ancillary work assignments in which full time scheduling is not necessary, and (3) use skilled or semiskilled personnel on regularly scheduled part-time bases where such skills are in short supply. For instance in 1962 the Veterans Administration employed 22,000 part time employees, including doctors, nurses, and medical technicians. A number of other Federal agencies employ part-time personnel. The part time employment of women to meet peak workload requirements is a recognized practice in the Federal Service. But to what extent may part-time employment of women be directed to accomplish the objective stated by President Johnson ". . . . to recruit, hire, and consider for advancement qualified women on all levels on an equal basis with men?" To what extent may the part-time employment of women fully exploit this reservoir of talent, education and skill? To what extent may such a program assist in the advancement of women to new career heights and responsibilities?

I feel that the Atomic Energy Commission provides a singular laboratory to explore the potential of a planned part-time employment program for women.

First, let us examine the composition of the AEC staff. The Commission is primarily an organization charged with managing America's widely diversified nuclear energy program. This ranges from nuclear weapons to the research and development of a variety of peaceful uses of atomic energy. Some of these are the uses of isotopes in industry, agriculture and medicine; the use of nuclear energy in the space program, nuclear power for the propulsion of sea going vessels, and the development of nuclear fueled electric power plants. The actual research and development, construction and manufacturing are done by contractors "supervised" by the Commission. The Commission is also engaged in regulating the use of nuclear energy by individuals, companies, and universities. There are approximately 7000 employees on the staff of the Commission. 4000 of these are considered as professional - both technical and management. 259 of 4000 professional employees are women. Of the 259 women 97 (or 37%) have university degrees - 68 bachelor degrees, 26 masters, and 3 Ph.D.'s. 77% of the men in this professional category have degrees.

Obviously there was -- and there still is -- plenty of room in the AEC for more women with professional training. However, we did not have a large staff with fluctuating workloads that called for seasonal or irregular part-time employment. Our predominant and long-term objective became clear and simple: To establish a program that would increase the number of qualified women in full time professional positions.

Recurrent in the many reports concerning the employment of women were these observations:

1. (In the Federal Service) Women in the younger age group have a quit rate between 2 1/2 and 3 times that of men. Almost half of the women who leave (Federal agencies) give reasons related family responsibilities.
2. Many women who do leave the labor market because of family responsibilities will welcome the opportunity to become re-employed (after their children are in school, or leave home for college, etc.) but are faced with three frustrations: (a) the need to update their professional skills and knowledges, (b) their anxiety and concerns in meeting the uncertainties of adjustment to a work environment, and (c) the need for the opportunity to make their talents and abilities known to potential employers.

From these observations it was rationalized that first consideration should be given to any process that would focus primary attention on returning the professionally trained ex-employee to her profession. A solution was the part-time employment program - but a definite program with a purpose.

Such a program was established in the AEC with these specific objectives:

1. To use part-time employment as a means of reintroducing professionally trained women to the employment environment and to update their training and skills to current practices and technology.
2. To place more women in a position to favorably compete for full time assignments and positions, and

3. To provide additional staff assistance otherwise not provided under full time regular personnel ceilings.

To put this program into operation required positive aggressive action. I will not dwell upon the sales campaign. Suffice to say, with the advice and counsel and support of Dr. Mary Bunting, one of our five Atomic Energy Commissioners and with the wholehearted support of Chairman Glenn Seaborg and his other fellow Commissioners, we had top management support.

The second step was the initiation of a national recruitment program which extended beyond the normal recruitment sources. We went to women's clubs, professional organizations, community groups, and other recognized women's organizations.

The third step was to make selections on a basis consistent with AEC's regular personnel merit system for full-time employment.

We established certain employment conditions:

- Women employed under this program must meet the training and experience requirements of full time positions.
- Each individual employed under this program must agree to a fixed work schedule. Normally this will be four hours per day, five days per week (Monday through Friday).
- Salary will be on a pro-rated basis of the full-time rate. As an example, the full time entrance rate for administrative type position is $8,961 per year. Thus, a person working on a four-hour per day, five days per week basis would earn at the rate of $4,480.50 per year.
- Requirements for selection include the following: Completion of college curriculum in one of the sciences, engineering, or management disciplines; experience at the professional level; U.S. citizenship; satisfactory pre-employment investigation; satisfactory security determination based on full background investigation by the FBI; and satisfactory pre-employment physical examination.
- No close relatives of AEC employees will be employed under this plan in any AEC office.
- Persons employed on a part-time basis will be covered by Social Security.
- They will also be covered by the Federal Employees' Compensation Act which provides compensation for disability and death and full medical care for employees who suffer

injuries in the performance of their duties.
- Part-time employees will earn sick leave.
- Part-time employees will be eligible for training and development.
- Part-time employees will be eligible for incentive awards.
- Vacation leave will be credited to part-time employees on a pro-rated basis.
- There will be no discrimination against or in favor of an employee or an applicant for employment because of race, color, sex, creed, physical handicap, or national origin. Applications from all qualified persons are welcome.

Early developments while not wholly surprising were clear and distinctly patterned: (1) We were not swamped by well qualified applicants; the broom and the dust mop did not automatically drop to the floor; children, even those of high school age, were not abruptly left to fend for themselves. (2) The geographic factor and the number and schedule of working hours asserted themselves as important considerations.

The contemplated transition from family life back to the work situation require more than a "first-date" enthusiasm. This was particularly true when viewed in the perspective that the part-time job was the first step in a longer range consideration of eventual full time assignment as a regular contributing member of the professional staff.

Since recruitment started in February, 1965, over 200 applications of professionally qualified applicants have been processed at AEC offices. Forty women have been employed under this program. Half are at Headquarters and half are in the Field Offices. The average woman in our program is married, thirty to fifty-five years of age, and has one or more children.

She works on a fixed schedule, usually four hours a day, five days a week, arranged to fit work assignments and home obligations.

Flexibility in work schedules has been found to be one of the biggest assests of the program form AEC's standpoint as well as that of the employee.

One of our principal targets is to have the program include as many professional fields as possible. Of the total number of women employed, 5 are lawyers, 3 physicists, 5 chemists, 3 education specialists, 5 personnel and management specialists, 3 historians, 6 technical writers and editors, 2 in industrial relations, 2 engineers, 3 accountants, and 3 journalists or public relations specialists. All of these employees have bachelors degrees, ten have masters, and one a Ph.D. Five of these also have law degrees. Thirty colleges and universities are represented by the bachelor degrees alone.

You may like to know what some of our women are doing:

Gail Bradshaw - Assistant Information Officer, Washington, D.C. Researches and writes public information statements and news releases.

Martha Hobson - Publications Editor - Oak Ridge Operations Office. Reviews, edits and writes scientific and technical manuscripts.

Beverly Clark - Personnel Training Coordinator, Washington, D.C. Responsible for planning, development and execution of orientation and training programs for secretarial personnel.

Millicent Brandenbrug - Research Assistant, Office of the Historian, Washington, D.C. Responsible for special historical research projects such as a study and treatise of AEC safeguards.

Helen Keller - Radiochemist, Health and Safety Laboratory, New York. Mrs. Keller is concerned with the functions and analyses of a variety of types and samples. The analyses are an important part of the scientific research of the laboratory in the areas of fall out, health physics and meteorology.

Esther Zucker - Physicist, Special Projects Division, New York Operations Office. She performs analyses and assists in the design and development of radioactive isotopes as sources for marine and terrestial uses such as the totally implanted cardiac pacemaker.

There also may be some interest in several examples as to the manner in which home commitments are arranged:

1. A research assistant had only one of her four children home on a year-round basis when she started to work at AEC. Two brothers are at college and the other brother is away at prep school -- three good reasons the new job is helpful financially. She is married to a college professor with a somewhat flexible schedule, thus it has been possible to arrange her work for the AEC historian

so that household help can be kept to two days a week. Starting out with a four-hour, five-day a week schedule she now works two and one-half days a week in order to be in a car pool.

2. One physicist is married to a lawyer in private practice who believes a wife is more companionable when working at a job such as she has. His help and cooperation plus two baby sitters and a generous "grandmother" make it possible to leave the two children, four years and 18 months, while she spends one six-hour and two seven-hour days assisting reactor physicists in the Division of Reactor Development and Technology.
3. A cooperative husband and abundant nautral energy is the answer to why one "part-timer" can work five hours, four days a week as a Personnel Management Analyst and still manage three sons and a four bedroom house without outside help. Early in their marriage the husband, a foreign affairs officer, was prejudiced against working wives and mothers. Through limited early jobs she was able to prove that neglect of children and house were not logical results. Now he and the boys indicate their approval in many ways.
4. An information officer, married and with four young children at home, finds that because the part-time work is professional, with professional's pay, she can afford to pay for exceptionally good child care.

It is too early to arrive at any valid conclusions as to the success of this program, success, that is, in terms of the objectives stated earlier. Brash statements, prematurely made, may be only reflections of consequential enthusiasm or at the most, irrational wishful thinking.

We do have problems - and we do have some preliminary reactions. The "problem" areas can be defined rather specifically:

1. Continuous effort and constant vigilance must be employed to assure that work assignments are of professional level and scope with adequate opportunity for the part-time employee to perform at higher levels of difficulty as she becomes oriented to the work environment.
2. It is important that the placement action be sound, that there is a "match" between the work assignment and professional qualifications and interest of the individual.

The interest factor cannot be over-emphasized particularly in the initial days of employment when the transition from the environment of family responsibilities to that to work and family responsibility must be made.

3. During the initial days of employment there is need for understanding on the part of the supervisor, and for some flexibility in work arrangements and scheduling to facilitate the adjustment from the 24-hour domestic schedule to to the work schedule. Temporary shifts in time schedules are needed to provide for earlier arranged dental and medical appointments and to provide for care for children.
4. Enthusiasm and interest in the "new found career" will wane: the bridge club, the golf course, and even the kitchen will have a new appeal - unless challenge and enthusiasm are instilled early in the work situation. It takes time for professional motivation and incentive to become self starting. There is need for time to gain confidence in one's ability and talents - to recall the satisfaction of past skill applications and accomplishments. To meet this need in professional work there must be an early understanding of career purpose and objective, and here is where we strike the difference between just working on a part-time job and working part-time as an interim step to re-enter the career ranks! It is this approach that gives purpose to this program from both the standpoint of the employee and of management.
5. There are placement problems as I mentioned above, and there are adjustment problems. The part-time employee may find that the adjustment at home is not satisfactory; that the home interest is predominant and cannot be replaced even in part by a job interest. It is well if this is discovered early enough not to reflect either on the employee or the work situation.

Some of our preliminary "reactions" or evaluations may also be interesting.

1. There is a high degree of acceptance by supervisors in the use of women in responsible positions.
2. The AEC is obtaining very valuable and timely work performance from those employed on a part-time basis.
3. Generally, the participants have been most enthusiastic in their reactions to the program.

It is planned to have fifty women employed part-time on this program as of June 30 this year. This is a net figure and does not include those who are selected for full-time postions. It is intended to raise this number to seventy five by June 30, 1967, and to one hundred by June 30, 1968. And it is expected that we will continue at this level.

I would like to see a turnover from part-time to full time employment of 15 to 20 per cent each year.

This procedure may well become the significant entree of professionally trained women into the Federal Service. We certainly hope to make it so for the staff of the Atomic Energy Commission, and in turn we expect Commission Management to reap rich dividends in competence and talent.

Let me again say this has been a real pleasure. If any of you are ever in the Washington area, I hope you will give me a call. But if a woman answers -- hang up.

Thank you.

Helen Hornbeck Tanner:

After these stimulating speeches, you may well be virtually bursting with questions and all kinds of pertinent observations. Since it would be impractical to invite the entire audience to speak at once, we have asked Dr. Charles H. Rehmus to comment on the two preceding papers. Dr. Rehmus is Co-Director of the Institute for Labor and Industrial Relations at The University of Michigan. Listening to his remarks, you can compare his reactions to your own.

COMMENTS

by Charles M. Rehmus

I accepted your invitation to speak to you today not only with pleasure but with a reasonable feeling of relaxation. I was confident that my remarks could be in a framework of hard data about the economic and social position of women workers in our society. Dr. Mueller has ably pre-empted this subject, however. So I am left to turn from the relative precision and security of the facts that we as a society know about women workers, to an area of great insecurity - what I think I know about women workers in our society.

I will move somewhat arbitrarily among the things that seem to me noteworthy in these two excellent papers. I was struck by the amount of care, the amount of thought, the amount of deliberate energy that has been devoted to the program that Mr. Tackman described. It fills the needs of the Atomic Energy Commission in a world where there is a real shortage of professional people. Moreover, special programs such as this can help other employees in our society discover new approaches to the employment of women in the professions. At the same time that I reflect on the amount of energy and purpose that the AEC puts into this program, it seems to me that their results, in terms of total number of people involved, are very small. They have secured at tremendous effort approximately fifty professional women for the Agency. Yet we have something over 300 women at this conference today, many of whom I assume would like to be involved in jobs of the kind described. While I don't depreciate the AEC's efforts, I think it indicates very clearly the size of the problem that the whole society faces.

The government's efforts in the field have been commendable. Even though Dr. Mueller pointed out that the Federal Government has the great bulk of its women employees in the lower pay classifications, there is undoubtedly less discrimination in hiring practices in the Federal Government than there is in the private sector generally. Our problem as a society, and your problem (if you are interested in going back to work in professional occupations) is that of the attitude of private employers and privately structured job markets.

Another generalized comment in regard to Dr. Mueller's paper. She notes that the principal professional occupations open to women - teaching, nursing, library work - are, in our society, the lowest paid professional occupations. This, however, is a characteristic which is not unique to American or Anglo-Saxon society. You might be interested to know that in Russia, the professions of medicine and the law, which are women's occupations, are among the lowest paid professional occupations in that country. Now, the reasons for this are not clear. Whether it is because of problems of training, or some of the problems of discontinuous work, or because of some innate and remaining discriminatory tactics by Russian males, like American males, I am not sure. But the fact remains that in modern industrial societies, those professional occupations which are thought of as women's occupations are the lowest paid, irrespective of what they are.

Both of our speakers this morning have dicussed the problems of part-time work. Dr. Mueller hopes that there will be an increase in opportunities for part-time work for women; and Mr. Tackman feels part-time employment should simply be the entrance step, the transmission stage into full time employment for women. My own feelings about this are based upon my own experience, but I would suggest to you that one of the more reasonable things Professor C. Northcoate Parkinson ever said - I can't quote it precisely - is that the amount of time required to do a given job expands proportionately to the amount of time available. In my own Institute, we hire a number of women in part-time professional and semi-professional jobs. My personal experience has been that we get just about as much work done, or at least three-quarters as much work done, by women on a half-time appointment as we would if they were on a full time appointment. We do not suffer the losses of daily start-and-stop time that employers have generally feared from part-time employment. I also suspect that we take advantage of our part-time people, simply because the amount of personal and professional overtime they put in is about the same whether they work part-time or full time. I hope that the society will take an easier view of the possibilities of part-time professional employment for women; and that in years to come the classification analysts and organization theorists will be content with the thought that part-time employment is a good thing and will serve adequately the needs of organizational efficiency.

I am convinced that women will always be discriminated against in one area and that, as a matter of fact, they should be. This is the managerial executive area, whether it be the director of a research function, the head of an operating unit, or in similar responsibilities. People who make promotions, who map out managerial jobs, invariably should and do take into account two criteria: ability and experience. As Dr. Mueller's figures show, because of their part-time employment and because of the discontinuous nature of their full time employment, women in general in our society have about half of the amount of experience as the men with whom they are competing. This is a legitimate, proper factor for those who promote to take into account. Therefore, I suggest to you that in general women will not get the supervisory positions, even in the professional ranks, to which their innate ability and their initial training might otherwise entitle them.

From these matters of which I feel reasonably confident, I would now move to one where I feel very much in doubt. I want to tell you of a conversation which I think is reasonably typical and which describes one of the most serious problems of employment of professional women. Whether it is accurate, whether it is valid, I am not sure. But certainly the existence of the feelings it reflects is a fact.

This particular conversation took place in a Washington hotel room after a day-long conference. Present were ten professional personnel people, seven men and three women, eight from the private sector, two from the Federal Government. The question that I propounded to this group was, "Why are almost no women given opportunities in industrial and labor relations work?" The first thing that the group generally conceded was that it was not that women did not desire such opportunities, but that they were not given them. Many personnel women would like to get into labor relations because it is one of the most interesting, fascinating and challenging aspects of personnel work, but they are systematically discriminated against.

"Why, then, are they discriminated against?" Again we discussed it and after several false starts came to the conclusion that the reason there were not more women in labor relations work, even though they were otherwise qualified by training and experience, is because labor relations is a field in which there is a great deal of conflict, of accusation, of attack. The group agreed, whether rightly or wrongly, that the biggest weakness of women in professional positions is that they personalize criticism. They would tend to personalize the labor-management animosity to a much greater extent than would men and thus they could not control it.

And then we asked ourselves, "But why, if this is true, do they personalize? Is it innate?" We suspected that women personalize because they are insecure in their positions. Why? The concensus that emerged is that women are expected to be competent in many more fields than are men in our society, and therefore they naturally tend to be insecure because of the immense range of challenges that face them. Working women are expected to be competent as wives, as mothers, as homemakers, and as professionals, whereas a man feels competent and secure if he is a good wage-earner and is a reasonably good father to his children. "How can a woman meet this great variety of chalenges and still feel completely and totally secure in every one of them unless she is an unusually egotistical or an unusually competent person?" The fact is she can't, or ordinarily does not. Therefore she is more likely to be insecure and more likely to personalize criticism.

Now, I have no idea whether this whole discussion stands up to logical, psycholgical or sociological standards. I have no idea what you think about it. I do think it reflects with reasonable accuracy what men in general believe. Moreover, I think men are given many opportunities and many excuses for continuing to believe it as they work with women in their own organizations.

Turning to a final subject,* many women today believe that the attitude toward their employment will now change, and that their opportunities for employment will improve, because of the operation of Title VII of the Civil Rights Act which forbids discrimination in employment based upon sex. I believe that unless women move affirmatively to take advantage of the opportunity granted by this title of the act that nothing particularly will come of it. This legislation is not self-effectuating, despite the fact that an Equal Employment Opportunity Commission was set up to enforce the Act.

There are many reasons why, if you don't act, I think nothing is going to happen. In the first place, it is fairly well known that the word "sex" was added to the Title VII as a joker in an attempt to defeat the whole legislation rather than because of any genuine effort to improve the employment opportunities of women. This is bound to make some employers less than forthright in their administration of the prohibition of sex discrimination. I suppose this problem is epitomized by the remark of Mr. Roosevelt, the Chairman of the Equal Employment Opportunities Commission, who admitted that the whole issue of sex discrimination is terribly complicated. Now I don't suggest that our society today is in such a condition that women must parade on the streets or chain themselves to the front doors of corporate office buildings, as your forbears did a few generations ago. Nonetheless, I think women must do something to insure that the Act is going to be enforced.

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*This discussion was suggested by an interesting article "You Can Help Change the Climate for Women" by Jean Wade Rindlaub in the February, 1966, issue of The Radcliffe Alumnae Bulletin. C.M.R.

I don't know whether you have looked at the "Help Wanted" columns of the local newspapers lately. I have a clipping torn from last night's Ann Arbor News, heading the section on employment, which I would like to read to you. "Notice: many occupational opportunities listed in the Male or Female classifications are not intended to exclude or discourage applicants from the opposite sex. They are classified for the convenience of readers, to find those occupations which are considered more attractive to persons of one sex than another." To this disclaimer I say a loud "BOO." I think there is practically no validity in the reasonableness of the classification, no more than there is in any other discriminatory act of classification.

For example, the listings under Help Wanted Female began with "Baby Sitter." I assume that most people are competent to judge, as are men, whether or not they are qualified for or desire that kind of employment. But when I turned to the beginning of the column that said Help Wanted Male, the first offering of an employment opportunity under that column in last night's newspaper was "Architectural Draftsman," and subheaded under that "Interior Designer." I thought to myself there are probably not many architectural draftsmen who are women, but if there are any, I don't know why they wouldn't be as competent to fill this job opening as any man. It is equally true of "Interior Designer." The third item that interested me particularly was an opening for an "Administrative Assistant." The job appeared to be, from the description of the ad, a rather important type of administrative assistant position, calling for a number of responsibilities and a number of qualifications which my own administrative assistant, who is a woman, happens to have. Who was the person advertising for this administrative assistant in the Male column? The head of a large Michigan State government agency in Lansing. A few weeks ago in this same auditorium, the City Manager of St. Joseph commented," I sometimes think that certain aspects of the United States Constitution are not operative in our town." To paraphrase him, some aspects of the U.S. law appear not to be operative in the State of Michigan.

I suggest that if you really want to make something of the Civil Rights Act, you must challenge things such as this. Either as individuals or through your women's organizations, which complain effectively about a great many things, you can protest such classifications. I think you must apply for jobs for which you believe yourself to be well-qualified but which are listed under the Help Wanted Male section of the newspapers. Confront some embarrassed and tongue-tied personnel interviewer with the fact that you are well-qualified for the job and see if he can think of some explanation as to why he and his employer are in fact discriminating despite the law of the land. I think that if you take lower level jobs, you must compete for the next higher job on the ladder. Women, in many cases and for many reasons, have not competed strongly for jobs in the next higher rung, and the rung above that, within their organizations. To the extent that they have not done so, they have condemned themselves and the women of the next generation to remaining only in lower levels of organizations. You must make this Act work for you, if it is to mean anything. If you do not, I fear that Title VII of the Civil Rights Act will be simply another milepost pointing down an unused road.

My own associate says that the phrase she hates most is, "It is a remarkably good job - for a woman." I sympathize with her, and I hope that through some of your efforts, this phrase, like other forms of discrimination, will come to disuse in our own time.

THE LUNCHEON SESSION

Jane Gibson Likert, Conference Chairman, Center for Continuing Education of Women, The University of Michigan:

One of the most fundamental and difficult problems that human beings ever have to face and deal with is how to accommodate to change. Resistance to change seems to be bred in our bones, but adaptation to changes comes hard. If anyone can give us even a glimpse of how to accept the inevitable with dignity and perhaps with grace, it is Dean Haber.

He, himself, has been changing with the changing times. I can remember when he used to go to Europe by boat, but in the last few years he has been whipping over and back almost between classes. He thinks nothing of flying to Paris for lunch.

Or rather, he thought nothing of flying to Paris for lunch when he was a professor of economics here, and even when he was chairman of the department. But now that he is Dean of the College of Literature, Science and the Arts, he has been forced to settle down a bit and accommodate himself to a less giddy pace.

He has also helped others adapt to change - world wide. He is the world president of the Organization for Rehabilitation through Training, an international organization for vocational training operating in 20 countries, which among other things, persuades young people that it is not demeaning for an educated person to work with his hands - a great change in some of the countries of the middle east.

He has been bringing about change in the United States National and State governments for a number of years serving on many councils and commissions. He has been a consultant to the Secretaries of Labor in four administrations. His latest publication, in addition to his many others, is a volume, "Michigan in the 1970s: an Economic Forecast."

World traveler, economist, author, advisor to the great, Dean of the College of Literature, Science and the Arts of

The University of Michigan, and member of the executive committee of the Center for Continuing Education of Women who will speak on Accommodation to Change - Dean William Haber.

ACCOMMODATION TO CHANGE

by William Haber

I'm excited about this meeting, this audience, this program. Looking around the room, you'd think that we were in the midst of a great depression: hungry people looking for jobs. This is not so; we've never been so prosperous. We're busy people, wanting to be busier, or wanting to be busy at something else. The Center for Continuing Education of Women is a significant development; it's important to the university and to the country. Fantastic technological forces make it possible to be both a homemaker and a constructive participant in the life or our community and in the life of our country. Useful employment is being sought. The job of the housewife is useful, but it is not "work" in the sense in which we think about it. It's not employment. It is activity: vital, crucial for the happiness of the community and the family. A job is more than activity. It's a relationship between an employer and an employee; it's a relationship for pay. A great number of people don't like to write "housewife" on questionnaires. It took a long fight by the Women's Party and the League of Women Voters to get the census to drop the term "housewife" and to put in the term "homemaker." "Homemaker" is a little more dignified. It implies creating, building.

I used to have a friend who came back here for an alumni reunion many years ago before the census changed the term, and Mrs. Fagan was given a questionnaire. "What do you do?" it asked. All she did was take care of four obstreperous children and an even more obstreperous husband. To her that could not be recognized by merely putting down "housewife." She wrote "household engineer." She was the only one registered by that title at that alumni reunion.

We have a manpower shortage in the country. It may last a long time. We have somehow learned how to deal with depressions. In the next six to twelve months we may learn how to deal with prosperity so as to avoid inflation and recessions. If we do, then we shall have the need for all the manpower and womanpower resources the country possesses if we are to meet the requirements of our industries, our offices, our universities, our public services, and our research institutions.

Since I know that Eva Mueller dealt with that topic this morning, I know it has been covered with thoroughness and skill. I have a different topic. I am asked to talk about "Accommodation to Change." The title is my own. Future histories, I think, will describe our time as an age of conscious social change. We are all involved in the process of transforming our institutions and transforming our society. We've had a most rapid growth of population, a massive flight of people from rural areas to cities, a most rapid growth of wealth and national income, the rise of submerged or oppressed sections of the world, mass education, extension of leisure. The change is world-wide; how pregnant these times are with change! I can perhaps best illustrate by recalling something that happened last summer, August 3rd, on the south lawn of the White House: ten thousand college students, working for the government in Washington on summer intern jobs, were preparing to return to their colleges and universitites. The program has been in operation many years. President Eisenhower started the custom of addressing these college students before they went back home, and President Kennedy followed it, and now President Johnson. When the President got up to the platform and looked at the ten thousand young faces in that lovely garden, all looking toward the White House, he stopped briefly before the microphone and then addressed them: "Fellow revolutionaries!" For the President of the United States of America to address ten thousand young people as "fellow revolutionaries" is an indication of how vigorous a change is taking place. Said he, "The revolution which began 189 years ago is not over. You young people don't like today's agenda. Neither do I," said he, and then proceeded to talk about change.

Fast changes are taking place; they are not over; we are certainly in for a period of what one writer called "rapid, headlong change." It's not new; change is perennial.

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What distinguishes these times, I believe, is its pervasive character. This is probably the most dynamic period in modern history. The tempo of change is unprecedented. Every institution is vulnerable. Every university, every business, every job, every skill, every labor union, every government operation, this college, this university is trying to accommodate itself to change.

"What is new," said Robert Oppenheimer, "is the prevalence of newness, the changing scope and scale of change itself." And, consequently, accommodation to change and learning how to live with change, at least making peace with change, is perhaps elementary therapy for every observant human being to note.

I have a friend in Columbus, Ohio - a rather old man, he's nearly 90. I see him every few years, and I'm always startled by the fact that he greets me with the same phrase: "Bill, I've seen many changes in my lifetime and I've been against every damn one of 'em!" He's in deep trouble, ladies and gentlemen. He must by now be a very frustrated individual.

May I refer briefly to six changes? Each is important, each crucial. The first is the political revolutions overseas, to which this country has to accommodate itself, with which it has to learn to live. Fifty per cent of the 114 flags under the United Nations did not exist in 1946. The new colonial countries have thrown off their mother countries. They've become independent, autonomous, sovereign, hardly stable. No one can refer to the situation in Africa as stable, or in Asia (Southeast or elsewhere) as stable. But, here they are. We, as a great and powerful country, perhaps the most powerful in the whole world, must accommodate ourselves to a hard fact we can't quite accept: that the newest countries, the tiniest of countries have the same kind of a vote in the United Nations as we have. It's hard to live with. Big countries tend to be bully countries. Historically, they've thrown their weight around. We have in certain periods of our history. Accommodation to such change is exceedingly important to us. It will take a long time before the American people accommodate themselves to the fact that the dramatic, traumatic changes which are taking place, which have made us a world power, require accommodation on our part.

The Civil Rights movement at home is another revolution. Don't underestimate it. Some 23 million Americans are asking for rights they haven't had for a long time. They're asking for equality of opportunity and education, jobs, housing, and public accommodations. The accommodation of the white community is going to be just as difficult as the accommodation of the black community. Labor unions, employers, institutions, and educational institutions in particular, must play a tremendous role. The issue is an explosive issue. Generations of neglect will not be corrected in a weekend or even in a decade. Take the matter of education. Do you realize that we have nearly as many students from Pakistan and India in this university as we have American Negro students? It's a rather startling figure: about 200 from India and Pakistan; about 300 Negroes. Some dramatic changes are bound to take place in the elementary school, in the high school, maybe in the Negro home, to make it possible for Negro boys and girls to be able to pursue an education at this university. We're in for a long period of accommodation. I become excited when I talk to large employers and learn what tremendous efforts they are making in apprenticeship and training and in employment policy. Sometimes you hear very funny stories about this subject. I was at the DuPont Chemical Company in Wilmington about a month ago. Talking to a factory manager from DesMoines, Iowa, I asked him, "How are you getting along with employment policy which now encourages you to go out and beat the bushes and search?" He said, "I'm having some peculiar experiences and some excellent solutions to my problems: I engaged a colored secretary. She was excellent, had all the skills I needed - courtesy, speed, industry. I said, 'My goodness! I've been missing wonderful opportunities. Here I've always had trouble getting secretarial help because I've never exploited the colored market.' I said to her, 'Do you have any friends who work like you?' 'Yes, I do.' 'Why don't you bring in a couple next Monday?' 'I'll be glad to!' She did. They were both white."

The third revolution is the attack on poverty. Every community has a poverty problem. It's fantastic that the nation in the most prosperous period in its history, with affluence never equalled, with economic security never greater, would launch a "War on Poverty". I've been intrigued by it. Why has it happened? The British haven't launched such a war. The Italians haven't. The French haven't. They have relatively more poor people, even by their standards, than we have. Why have we launched a "War on Poverty"? Frankly, it's very closely related to the Civil Rights issue. An overwhelming proportion of our poor people are colored people. We have concluded that unless we do something dramatic about poverty, we cannot increase educational and training opportunities for colored people. Their poverty is not only economic. Inadequate education has a lot to do with it; discrimination has a good deal to do with it; poor health has a lot to do with it; the death of the breadwinner is an important fact. When I say this to people, the question is often asked, "Aren't you omitting character?" Of course, it too is there, both for the white and for colored. When people tell me that not all the poor are deserving poor, I say, "That's right. Neither are all the rich."

The *research revolution* is the fourth one. We are in the midst of one of the most fantastic annals in activity, searching for ways and means to make today's methods obsolete tomorrow. Here at the University, there is a vice-president for research, responsible for the administration of the millions of dollars, almost as much as the legislature appropriates for the University's budget. What is going on at Michigan is going on across the country. We're spending about $20 or $22 billion a year for something called "R and D", Research and Development. What is its purpose? To create obsolescence, planned obsolescence. A very exciting and popular book by Vance Packard called *The Waste Makers* describes "R and D" and the research revolution. The government feeds most of the research and development, because of its relation to space and discovery, to its military and scientific programs. It underwrites basic research. When the international situation cools, and a great deal of "R and D" becomes privately financed, its impact will be even greater. In fact, it has made us all terribly conscious of research versus teaching. At every university there are teachers who are also scholars and who, in addition to meeting their classes and stimulating students with the tranmission of knowledge already discovered, also participate in the discovery of new knowledge. "Publish or perish" has become a sort of community slogan in college towns. It's not limited to Ann Arbor. I hear that the President of Notre Dame tells his faculty, "Publish or back to the parish!"

The technological revolution is the fifth one. The computer is probably the most profound discovery since the development of electricity. It is affecting every factory, office, bank, insurance company, college and university, and in time, it will affect every home. We are on the ground floor of one of the most fantastic technological developments since the Industrial Revolution of 150 years ago. It is affecting employment, both favorably and unfavorably. A couple of dry facts are pertinent: the railroad industry employs 700,000 people. In 1946, twenty years ago, it employed 1,500,000. In just twenty years, employment is cut in half! If you were a railroad fireman, you'd behave as he does: you'd like to hold on to your job. The soft coal industry employs 125,000 people; twenty years ago, it employed 500,000. We are not producing any less coal; we are not hauling any fewer passengers or any less freight. The longshore industry is just beginning. We have trouble on the docks because of the computer and because of the technological change taking place there which will mechanize loading and unloading. I am certain that in this school, as in many schools, we shall be at some time talking about teaching machines. We have a center by the name of Research on Learning and Teaching. We shall be talking about how we might, in spite of size, handle more people without a proportional increase in the number of teachers. Maybe there is a lot to learn about teaching. It isn't said anywhere that just because this is the way we taught 100 years ago, this is the way we teach now. We are learning that a great number of subjects can be taught in a much more mechanical way, with the gains greater than the losses. The faculty, of course, don't like it. They behave toward change just like Walter Reuther's members behave toward automation. They resent change. Never underestimate the conservatism of a university faculty.

I speak from hard experience. President Hatcher asked if I would chair a commission to establish year-round operation for the University. It was immediately dubbed "Bill Haber's Anti-featherbedding Committee." The trimester which has been developed is in a stormy situation now after its second year. There are problems.

Finally, there is the skill revolution. It is inevitable that research, which creates new products, new methods, and the knowledge which creates the computer, is going to effect skills dramatically. If I were to make an official statement of the government that 55 per cent of the American work force twenty-five years from now will be on jobs which have not yet been developed or have not yet been invented, you can get an idea of how many of us have obsolete skills, skills which are rapidly disappearing, going down the drain like values in a period of runaway inflation. Unless we can find some way to continually refurbish those skills, and it doesn't matter whether it's a mathematician, an engineer, a factory worker, or a typist - unless we can keep up (and that's what continuing education means), we will all be in deep trouble.

I was startled to find a National Science Foundation figure saying that the Ph.D. in Mathematics has six years' intellectual capital! If one doesn't continue to learn, in six years he starts to lose, because new things have come in since that Ph.D. was completed. The Ph.D. in Physics has seven years' intellectual capital, and in Engineering, it has nine years' intellectual capital. There is a professor in the School of Business, a very brilliant teacher, whom I asked where he learned all his mathematics. He replied, "Since I finished my Ph.D. at Harvard." Since! One of my colleagues here suggested that the Ph.D. be issued only for ten years, subject to renewal by another examination. Someone else suggested that the B.A. be issued on paper which evaporates in five years.

Accommodation to that kind of change will be very difficult indeed, and it will therefore seem not at all unusual to hear that 50 per cent of the students registered at The University of Michigan as freshmen report that they intend to do graduate work. They had better, and you had better. How much intellectual capital does a doctor have? I recall as a child when I asked my mother in Milwaukee, Wisconsin, what our neighbor did. She said, "He practices medicine." I responded, "How long before he knows it?" She replied, "He will never know it." She was right. Today there are more doctors who come here for post-graduate work in our hospital than young men being trained to be doctors. They realize the penalty of obsolescence.

Simultaneously, we have two developments of conflicting character: a great explosion of knowledge and a great obsolescence of knowledge! Change!

I love to tell a story about a man who returned to the Economics Department for his twenty-fifth class reunion. He walked in to the office to see the Chairman; the secretary was on the telephone. While she was phoning, he picked up a paper on her desk and looked at it. When she put the phone down and asked if she could help him, he said, "This is terrible! This is an examination paper. It is the identical examination they gave me twenty-five years ago." She replied, "Don't let it worry you, they've changed the answers." It is an intriguing situation and I haven't any doubt that it is true.

Obviously, these changes have tremendous economic significance. The average family income last year, Eva Mueller tells me in her last release, was $7,680. In 1960, one third of American families had $7,000 to $15,000 incomes. In 1965, 40 percent fell in this group; in 1970 it is estimated to be 50 per cent. Those who like to look in these crystal balls estimate that, assuming 1965 prices, the average family income will be $10,000 in 1975. Would you like to know what it will be in the year 2000? In 1965 dollars, $18,000. We are creating a leisure class, not company executives but wage earners. The thirty-seven or thirty-eight hour week is coming, and by 1975 perhaps a thirty-five hour week and a four day week. Walter Reuther thinks he invented it. He forgot about Robinson Crusoe - he had all of his work done by Friday!

In brief, the economic implications of the research revolution, the technological revolution and the skill revolution are creating a society which will maintain some kind of price stability. This will make it possible for us, for the first time, to deal realistically with education and with poverty. The educational implications are that by 1975 we will have about 230 million people, 50 per cent under 26 years of age. The college population will be nearly double what it is today. Our legislatures, our school boards will have to appropriate funds for education which will make present appropriations look rather small. A great deal of public education is needed, for the revolution of these times is largely a revolution of education. Economists have been able to calculate that for every input of labor and capital which has gone into our economy we can explain only 50 per cent of the growth of the gross national product; the other 50 per cent we can't explain. It does not grow out of more labor or more capital. It grows out of the increase‸general level of education of the labor force and of American management. In brief, expenditures for education are not expenditures; they are investments. For the first time in the last few years several books have come out under the exciting title, *Human Capital.* We used to think of capital as machines, foods, factories. A distinguished professor at Princeton wrote a book, *The Production and Distribution of Knowledge.* We talk about the production and distribution of coffee, of automobiles, of rubber, and now, of knowledge! It is now both an economic and a cultural item.

Finally, we must accommodate ourselves to a changed role of government. Perhaps it is true we can hope for better government, but not for less government. The reason we cannot is that we live in a society whose central product is service, not raising food (five per cent of the people can do that), not making things: houses, highways, automobiles, window curtains (another 40 per cent of the people can do that). More than half the people are engaged in providing services: music, preaching, teaching, beautifying, research, public health, recreation, social security -- these are the "bright future" jobs.

There are billions of American jobs which are dead-end jobs and aren't going to be here in ten years. The folks holding those jobs are going to have great difficulty accommodating to change. If I were to make on conclusion from all this, it would be that the major factor which makes adaptability to change easy is education. The more, the easier; the less, the more difficult. The real minority group in this country isn't going to be on the basis of color or religion; it is going to be on the basis of lack of education. The uneducated are the people who have the worst jobs, the lowest incomes, or no jobs at all. Since government is a distributor of services, such as health, research, education, weather reports, space research, it inevitably must be a growing segment, using a larger proportion of our gross national product. The computer is not going to solve our problems; the computer will give us facts. Our problems are value problems, and value problems must be decided by people, not by machines. These problems are housing problems, education problems. These are not problems to feed into a computer. They are problems to be decided by the democratic processes which have been developed perhaps as successfully in this country as anywhere.

The biggest challenge I think we as citizens and individuals face, whether in universities or in homes or in offices or in factories, is to recognize that there is absolutely nothing static about what we know or what we do. There are eternal verities; no one yet proposed that we add two more commandments to the ten; in fact, we are having difficulties enforcing the ten. Those eternal verities are old. Leaving aside these basic human relationships as spelled out in the Sermon on the Mount, we are living in a situation of such dynamite that it behooves every one of us to learn how to manage, how to accommodate to change.

THE AFTERNOON WORKSHOP SESSION

Abstracts of Proceedings

WRITING, EDITING AND PUBLISHING

Chairman: Guy C. Larcom, Jr., City Administrator, City of Ann Arbor, Michigan

Panel Members: Mary C. Bromage, Assistant Professor of Written Communication, School of Business Administration, The University of Michigan

Mary Kincaid, Creator of the French Comic Strip, "Contes Francais", Ann Arbor, Michigan

Joyce Kornbluh, Assoicate Editor of Poverty and Human Resources Abstracts, Institute of Labor and Industrial Relations, The University of Michigan

Stevens Rice, Vice-President and Director of Editorial Services, University Microfilms, Inc. Ann Arbor, Michigan

Recorders: Mary Critchell

Faith Willcox

Hostess: Jane Likert

Bromage: When women decide they want to take on regular employment, they might think of it as "doing what they want to do for money." It is important to be sure it is what you want to do. Your previous experience with volunteer work may have clarified two things that must be considered when you take employment: a commitment to meet the job obligations regularly and conscientiously; and the ability to take orders. You can't get away from those two things.

My work on campus as a teacher of written communication in the School of Business Administration allowed me quite a bit of scope for initiative; for example, preparing my own paperback text for functional English. Of campus I serve also as a consultant to organization officers who must submit reports to the top echelons. For instance, Army officers prepare regular reports they have to send in to the Army Auditor's Office. These are likely to be written in the field - often sitting on a packing case—where coherence and conciseness are hard to achieve.

The great bulk of written communication today, tomorrow, and the next day is "functional writing." In helping people write about their practical day by day operations, I consider myself ethically bound not to distort or embellish. The aims are to be concise, to keep a "double clarity," which is to use words clearly, to prevent possible misinterpretation and to be persuasive. I am actually trying to teach the most efficient use of words, sentences, and paragraphs.

Words on paper contain both magic and dynamite. Many men feel seriously handicapped in using them. The ever-increasing specialization of work means more and different kinds of reports to be written. Writing is a transferable skill. You can take it with you wherever you go.

Let me show you the kind of opportunity that is widely available: I have here a letter from a Cleveland firm. The editor of the house organ is being transferred to London, and is trying to locate a successor. The salary they are offering is $7200 a year. This should give you some idea of how great a need there is in the almost uncharted territory of English as used in the business world.

Rice: We at University Microfilms are publishers on microfilm, or derivatives of it. We can enlarge by Xerography, or we can supply film in its original size to be read in viewers. The great advantage of our product is that we can publish just one copy at a time, or however many copies are wanted. In the case of doctoral dissertations, it's often hard to predict how great the demand may prove. Our service here is unique. Xerography has been a forerunner in what promises to be a publishing revolution. Soon there will be many different formats to choose from.

Most of the authors we deal with are long since dead. We duplicate works which are out of print, difficult to obtain, or deteriorating. Much of the newsprint used since 1900 contains chemicals which shorten the life of the paper. Where shelf space is a problem, we supply film which can be stored in a fraction of the space that books or other publications would require.

Our editors make use of library training, for the film must be cut and arranged in good bibliographic order. You will be interested in hearing that 40 of the 45 members of our editorial department are women. In our highest salary bracket, we have four men and eight women: one of our three managers is a woman; and in addition, three editors, one book production specialist, one company librarian, and two cataloguers are women.

We recognize a hazard in employing women in top jobs. They are often unable to travel on demand, especially if married. In spite of this, they are holding jobs a advertising copy-writers, in public relations work, on the house organs, in design, and in book production.

Kornbluh: I am going to speak as a wife and mother about some of the writing opportunities which fit our needs and talents while we are still busy raising a family. For me, there has been a variety of choices: editorial work, writing copy for book jackets, contents summaries, or the wide field of abstracts. I started doing part-time editing on the campus of The University of Michigan. My youngest child was still in nursery school when I answered an advertisement for writing jacket copy on a piece-work basis. There are many such fill-in jobs around the University for women who can work only on an irregular or part-time basis. Many organizations such as The Institute for Social Research, the School of Business Administration, The Bureau of Industrial Relations, the School of Public Health, The Center for Conflict Resolution publish journals or monographs. Several of them publish journals consisting entirely of abstracts. There are other groups such as those working on the Middle English Dictionary, and publications such as The Mathematical Review, and The National Journal of Microbiology.

You can start off by filling in an application with The University of Michigan Personnel Office, but you should also go around to the various institutes and departments. Take with you some samples of what you can do. Maybe you can help a professor prepare a book or an article; maybe you can read proof. Perhaps you will find a specialist who needs a sounding board to find out if he is expressing his ideas clearly. I remember my first interview with an editor. He didn't look up when I came into the room, though I know he heard my high heels click on the floor. Still shuffling papers on his desk, he asked, "Mrs. Kornbluh - are you any good?" Don't undervalue yourself! Of course you are some good!

Stress not only your technical abilities and experiences but also any special interests. Make use of your background in volunteer work when you apply. Perhaps your research experience in volunteer organizations has some real bearing on your application to The Institute for Social Research or The Center for Conflict Resolution, for example. Don't forget, women who have had experience as homemakers represent a tremendous reservoir of maturity and skill in helping people and in getting things done on time!

Larcom: I want to say a few things about governmental needs for writing and editing at all levels of government, from city to state and federal. We in government need to "sell ourselves" better, and reporting to citizens is part of our responsibility. (Sometimes, as the first time we published such a report in Ann Arbor, it brings a howl about misusing taxpayers' money! Nonetheless, there is a great need to interpret activities of government to citizens.) Annual reports from city governments and planning commissions are now a generally accepted part of our job. Administrators shrink from writing them, and you can be valuable to them if you can offer skill and clarity in presenting facts, and especially if you have some knowledge of graphics. There are research studies to be written up, from the Congressional level all the way down to city councils. There are bulletins, releases to the press, factual summaries, house organs, and departmental reports.

There may be salary limitations if the report writing hasn't been budgeted, and such jobs won't be available at all times, but specialized knowledge is not necessary. If you are really interested in government and sympathetic to its problems, you will find that you are needed. The abilities required are not highly professional, but the ability to get information, to talk to the people involved, and write simply so people can understand it - that is what is required.

Kincaid: If you have an electric dishwasher, it may be limiting your imagination. I had to think about something while I washed dish after dish and looked out the window.

School children used to pass by my window and I noticed that all of the neighborhood seventh grade boys no longer went to French class. It always had seemed to me important for young Americans to learn a second language since communications all around the globe have become so essential. So I began to wonder how learning French could be made more interesting to boys. I was thinking about Victor Hugo's Les Miserables—a very exciting book, full of spine-tingling episodes, with a number of tightly woven plots-within-a-plot - and asked myself, "Wouldn't this interest boys a lot more than 'This is the door of my aunt's house,' or 'I place my pen upon this table'?" Then I thought, "Wouldn't Les Miserables make a marvelous comic strip!" and wondered why somebody didn't do it. It took weeks and weeks of dish-washing before it occurred to me to do it myself.

The Ann Arbor News editor was surprised when I presented myself with some samples. Most strips are marketed by syndicate salesmen. He was also startled to be offered something in French. But he decided to try it. Soon schools were devising ways of projecting it onto a screen, and asking why it couldn't be produced on film strips. Publishers became interested in putting it into book form, and others raised the question of putting it into color. I think my experience has taught me that an idea, if it is an important one, can propel you into wider and wider applications.

How can a woman in a non-university
city go about finding an outlet?

Bromage: In looking for a job in writing, try going to any large organization (one with 75 - 100 people on the payroll) and offer your services as consultant (I'd avoid saying "teacher") to help men overcome their resistance to writing. Bear in mind that if the company won't hire a consultant, it may have to hire an editor. A consultant on writing problems costs less, for the regular staff does the writing. I admit that getting the job is harder for mature women than for young men. But there's a huge field. If you want the job, you must demonstrate that you know how to select material, what emphasis to give it, how to order the topics. Also, you must be able to present your abilities persuasively. There are opportunities to teach writing or consult on writing anywhere except in a very small town.

Kornbluh: In any non-university city there are plenty of short-term, free-lance assignments in writing and editing. Some employers that I think of off-hand are the local board of education, or some of the special interest groups like the Civil Liberties Union, the League of Women Voters, the National Sharecroppers' Fund, or any of a variety of "cause" groups.

Kincaid: There's a great deal of work that could be done, say in a metropolitan area or in a small town in Appalachia, with people who need to learn to read or to read better or faster. You can discover ways to get information across to them simply - in balloon captions, for instance. People who are resistant to the ordinary ways of learning are just waiting for a more imaginative suggestion. Try out a slant of your own.

What is the difference between "writing" and "editing"?

Rice: It's a fine-line distinction. An editor may suggest changing the end of a story. Or he may confine himself to changing the grammar. But isn't this "writing"? There *is* this distinction: while most writers could presumably edit, not many editors are capable of creative writing.

Larcom: If you are interested in editing, it is a great advantage to know something about formats, printing problems, design, "book production" in short.

Who and what is a "consultant"?

Bromage: I'm using the term as it applies to the field of functional writing. Here, you can't take liberties, elaborate, or change the content in any way. A consultant must work side by side with the thinker, act as his aide in finding the best use of words, sentences, and paragraphs.

What exactly are "abstracts"?

Kornbluh: Take the *Poverty and Human Resources Abstracts* as an example. We publish six issue a year. Each issue includes 50 abstracts of articles and books and about 200 briefer "annotations." There is also one "trend article."

Almost all these abstracts are written by people working at home. (For my part, I can get two or three times as much work done at home as in an office where "office culture" expects you to take a coffee break, and where phones are ringing constantly.) What you need for abstracting is an analytical mind, the ability to conceptualize and synthesize, the ability to follow the rules of grammar and make the material interesting to read. I know of at least four other journals published on this campus that consist entirely of abstracts.*

There are a number of national periodicals, too, that specialize in abstracts - probably 25 or more. The Reader's Digest and the Catholic Digest are two that come to mind.

What services does University Microfilms offer?

Rice: This won't be a definitive list, but here are some examples:

We preserve materials that might otherwise be lost.
We bring materials to you from distant repositories.
We republish materials in short supply; there are at least 20,000 modern books now "out of print."
We help libraries and offices save space; microfilm copies of periodicals take only 6% of the shelf space of the originals.
We publish new materials, such as doctoral dissertations, for which the demand is uncertain.
We can produce information on film cards which can be rearranged and interfiled as new articles come along.

I would like to hear more about how Mrs. Kincaid sold her idea of a French comic strip.

Kincaid: I took in some samples, both of drawings and cap

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*Abstracts of Hospital Management Studies, Cooperative Information Center for Hospital Management Studies
The Michigan Index to Labor Union Periodicals, Bureau of Industrial Relations.
Personnel Management Abstracts, Bureau of Industrial Relations.
Public Health Economics and Medical Care Abstracts, Department of Medical Care Organization, School of Public Health.

tions. Once the newspaper started printing the comic strips, schools began asking for it in film form. Then a publisher was interested when I could report a number of requests for it in book form. This interest resulted in several booklets.*

Bromage: The big question we have to ask ourselves is what job would I want to do? In our homes we have status. Unless we are highly creative people, we should expect less status and perhaps a less exciting job than Mrs. Kincaid's. The main thing is to get back into circulation. We may have been cut off from the world for some years. We ought to find women in like situations, compare notes on where the need for our services exists. I am convinced there are more needs for women's services on a part-time basis than ever before. Don't get discouraged easily. Women are being accepted more and more widely as working people. Their sex is being seen not as a deterrent but as an advantage. You just have to keep trying and knocking on doors.

Larcom: All the same, it pays not be either to sensitive or too proud when you start looking for opportunities.

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SUPPLEMENTARY INFORMATION

For the competent woman interested in the field of writing, editing and publishing, there are jobs at many levels of responsibility requiring varying combinations of education, experience and creative talent. This field provides a unique opportunity for free lance work, and some jobs can be performed at home or on special work schedules.

At The University of Michigan, this work is carried on in a number of different settings, such as: the University Information Services where releases and publicity are prepared, the Office of Research Administration, and the University Press. In this university community, many professional journals are prepared for publication. Writing and communication skills are used at radio and television stations, both of the University and nearby localities.

In local government offices, people are needed to write proposals to secure government funds under new national programs, and to write reports and promotional literature.

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*Victor Hugo's Les Miserables, Prosper Merimee's Carmen, Guy de Maupassant's La Parure ("The Necklace"), all published by Parkken Publications, Inc., 416 Long Shore Drive, Ann Arbor, Michigan. 48107.

Small business firms tend to have brochures prepared by outside agencies or by an enterprising person on a free lance basis. Brochures, pamphlets, and catalogues are also prepared in University offices.

Technical writing, a fairly new field, attempts to interpret a particular development, program or product in language understood by the lay reader. The absolute essential for this specialty is knowledge of the area or product to be presented, as well as an understanding of the best modern methods of display. Special skill in layout and design is in great demand.

Editorial revision is a necessary step in preparing material for publication in the form of books, articles and newsletters. The abstracting of literature is appearing as a specialized art in the field of writing and is important in the total research process.

The publishing business calls for talents of many types, such as design, illustration, production, distribution and reviewing as well as editing. There are a number of small publishing houses and printing firms in the Ann Arbor area as well as the University of Michigan Press where editorial abilities and proof reading skill are utilized.

One of the pioneers in new technology in the publishing field is University Microfilms, a subsidiary of the Xerox Corporation. Xerox entered the publishing field about four years ago. Micro-publishing has grown rapidly and with it new jobs in the editing, research, and publishing field have emerged as well as those of a more technical nature.

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COLLEGE TEACHING AND ADULT EDUCATION

Chairman: William E. Stirton, Vice-President and Director of Dearborn Campus, The University of Michigan

Panel Members: Myrtle F. Black, Director of Adult Education, The Mott Adult Education Program of the Flint Board of Education, Flint, Michigan
Stanford C. Ericksen, Director, Center for Research on Learning and Teaching, The University of Michigan
David H. Ponitz, President, Washtenaw Community College, Ann Arbor, Michigan
Mary Alice Shulman, Lecturer and Concentration Advisor in Economics, The University of Michigan

Recorders: Gerry Brown
Genevieve Brigham

Hostess: Myra Fabian

Black: I am to discuss with you this afternoon the field of adult education. It is just as important, I feel, to attend to the education of adults as it is to the education of children. Adult education involves a process of learning, un-learning and re-learning.

There are part-time job opportunities in this field but not many full time opportunities as yet. Jobs in adult education are flexible in terms of hours and creative in terms of job possibilities. Within the field, there are both credit and non-credit courses. For credit courses, we need instructors who fulfill the regular professional certification requirements for teaching. For the non-credit courses, requirements for teachers may be somewhat different. Of course, we would look for the professional requirements for teachers, but in addition we would look for teachers who are interested in sharing skills and knowledge, persons who are creative, warm and outgoing. I would be interested in this kind of person for the positions I might want to fill in the adult education program of which I am in charge. Personality in many cases is just as important as skill.

Job opportunities in the field of adult education are unlimited. As needs develop within a community, the adult education program will try to fill these needs and will look for the proper teacher for the particular class or training program that is requested. There are dozens of things - classes, courses - that can be offered in a community adult education program. Jobs in this field are looked upon as opportunities for community service and not as a means of acquiring a "large salary".

Ponitz: I am president of a college with as yet no faculty and no students. I understand that this is the easiest way to run a college!

Thirty-five to forty percent of the high school graduates this year will go on for post-high school education or training. By 1980, some projections indicate that eighty percent of the high school graduates will continue some kind of education or training beyond the high school. Eventually a general re-training and re-tooling may be necessary. Community colleges often deal with the first generation college students, and emphasis should be on counseling. Washtenaw Community College is no exception and expects to have counseling an important part of its program. We are seeking highly competent teacher-counselors who have a depth of academic training coupled with broad-range interests and background. The curricula will offer a variety of technical and vocational programs leading to placement in specific careers as well as college transfer and general studies programs. For the teacher-counselor, a tri-dimensional responsibility is envisioned: one-third time will be devoted to classroom teaching; one-third time to preparation and self-improvement, one-third time to counseling with students. This is based on a minimum forty-hour work week.

Washtenaw Community College will need a particular kind of faculty member who can deal with educational patterns and problems different from those found in the usual college classroom. We are not concerned with the sex of our teachers but rather with whether the person is sympathetic to the goals of our college and will offer special teaching talents. This person must have total commitment (not teach one class and go home to forget the job) to the demands of this kind of program. The curriculum offerings will not be restricted by the normal time division, that is, semesters. Some courses may begin in the middle of the term if necessary or convenient for students. We expect that the college will operate from early morning until 10:00 PM. We might use two persons on a part-time basis to make up on full time job. This could work out better for both students and teachers. There is real opportunity for women who are dedicated teachers in the community college field in several areas. We hope to find talented women, trained in a profession, who are not already teaching.

Shulman: I am an example of a women who has returned to college teaching after a period of being at home with my family. I have a husband, three children, and work 3/4 time. I have experienced no anti-woman prejudice in my particular job - nothing but encouragement. I like what I do. College teaching fits better with home and family responsibilities than most jobs, I feel. Vacations coincide with those of my children. Some of my work can be done at home.

I would suggest that to prepare for this kind of teaching you begin graduate work in the field where your undergraduate concentration was. If you do, you will have a basis and background for course work. One course at a time may not be enough for you. You need to make a firm commitment both toward the training you will need and future job opportunities. There is no room for a casual commitment. You need to take enough course work to "rev up your own motor", to thoroughly involve you. One can have a full time commitment to a part-time job.

Ericksen: College teaching is rapidly becoming a rather complex arrangement. The pressures and the demands on The University of Michigan faculty as national leaders and as local teachers are tremendous indeed. New techniques and resources are being developed to help these teachers maintain their standards of instruction despite the growing number of students and the rapid acceleration of new knowledge that must somehow find its way into almost every course of study. The major scope of our work at the Center for Research on Learning and Teaching is directed toward developing the new procedures that will help both the teacher and the student. In the process of our research and service activities, we see the appearance of a number of new kinds of jobs; new positions evolve as a particular area of work begins to meld into a relatively stable pattern. By whatever name, the number of positions will grow and they seem to me, at least, to offer a satisfying and worthwhile way to spend your working hours.

In response to recommendations from different faculty committees, the Center for Research on Learning and Teaching was established in 1962 and attached to the Office of the Vice-President for Academic Affairs. To put it simply, the faculty wanted a place where it could turn for specific information and technical help about new procedures for college teaching. The result has been the creation of a new concept in academic affairs, a means by which teachers in all parts of the University can critically examine themselves as teachers and to seek new and better ways of doing this job.

This is not the place to describe the work of the Center, and it would take far more time than I am allowed to catalog the different kinds of positions for which many of you already possess the prerequisite requirements. I will simply summarize two different categories:

1. Under the heading of "automation and educational technology" we find the emergence of a number of new types

of positions. This trend is really just now getting started. Computers are here to stay and will have a tremendous impact on education at all levels. The utilization of computer technology in support of the instructional process must be backed up by a rather complex array of technical assistants, a new breed of librarians, editors and writers of instructional materials plus, of course, research assistants working on the evaluation side of things. Most of these specialists should be college graduates and with enough spirit of adventure to accept the need for constant and sometimes rapid changes and for not feeling that all is lost if the work completed last week is thrown out when it is realized the project was going up a dead-end street. The preparation of instructional material for entry into the computer (computer assisted instruction—CAI) is a demanding task and one for which the teacher needs considerable assistance from someone who has a basic understanding of the subject and who also knows the requirements for transferring this information the computer languages.

If you are frightened by computers, it is comforting to know that you will have the support of technical specialists. For example, at CRLT we refer to the Task Analyst as a person who can help the teacher select and utilize any number of different media (TV, programed learning, tape recorder, slides, etc.) to help the student achieve the instructional objectives of the course. These "media" might also include the selective use of the non-gadget means of helping the student learn and acquire knowledge - the lecture, the discussion group, the laboratory, the field trip, independent study and the like. The teacher is, of course, the responsible person and the final decision-maker but, more and more, he will need help in adapting his course material if he wants to make effective use of the growing inventory of instructional aids.

2. Outside the area of technology is still a different array of persons and positions making valuable contributions toward the better quality of college teaching. For example, the discussion group will likely remain as an extremely valuable mode of instruction. Fortunately, the skills and the success of a good discussion group leader are not necessarily dependent upon Ph.D.-level competence in the subject matter. With further training in the specific teaching

skills appropriate for the discussion group, many of you could serve in this capacity on a part of full-time basis. Many of the other educational functions that graduate student teaching fellows now perform could, and probably will, be done by specially trained persons who hold the A.B. degree—laboratory instructors, monitors in language laboratories, tutors, counselors, and academic advisors in residence halls, constructing and analyzing objective examinations, administrative assistants for research programs, editorial assistants in all manners of situations involving the written word.

I could extend this list of new and not-so-new positions in support of college teaching (also high school and professional schools). Their number will increase as new educational resources gradually move beyond the research and development stage and into widespread operational use. My basic purpose is to show that the complexities of college teaching today are generating a variety of new positions that have already been demonstrated as being thoroughly rewarding to mature and resourceful women (and men).

Stirton: We know that the induction age into industry has been going up (from twelve to sixteen to eighteen years of age) while the retirement age is continually decreasing. The trend also is to shorten the work day and the work week. The time span during which we can contribute in the working world is thereby decreasing. One has an ever shorter time in which he can make his contribution to society.

I like to think of this problem as a shrinking rectangle. The space which surrounds it is an area of unique opportunity for women in teaching, beyond the traditional and conventional opportunities. In this area you can select uniquely what you wish to do. There is the lag to be filled between the time of leaving school and the time when one can enter the working world. This time lag presents a challenge and opportunity for participating as a teacher in refresher programs, upgrading programs or maintenance programs. On the other side of the rectangle, we have the complicated and complex field presented by early retirement of our citizens. Here we have the social, political and economic needs of the retiree that must be considered. There are tremendous opportunities for women to participate in the educational programs that fit these special situations in working with this segment of our population.

You need to identify the areas where you can make your contribution - where you are needed most - and then prepare yourself for these situations.

> Are universities offering re-training program for women who, after a period of time with home and family responsibilities, wish to continue their education in a graduate program in the same area as the undergraduate degree which was received a number of years ago?

Shulman: A generalized answer to your question is "no". There are no re-training programs as such set up at The University of Michigan. One needs to call to the attention of the university this need for refresher courses at hours when it is possible for women to attend. You might work through the Center for Continuing Education of Women. There are ways of retooling on your own, however. You could audit courses in your field to see what new theories had come along since your last class-room study; you might find that the basic theory you had learned some years ago was still valid. You could retake courses taken previously to up-date your knowledge.

Stirton: There are Extension courses available in communities across the state that might offer the desired course work. Professional schools of the University often have conferences and workshops that may assist in the up-dating of knowledge in preparation for further academic study.

Black: In the field of adult education, we need to know the needs of women in order to set up specific courses. This could be done if specific interest were indicated.

> Is there a program which will prepare me for college teaching? How do I get started in preparation for a program leading to college teaching?

Shulman: A master's degree can qualify you for teaching in higher education. Although traditionally the Ph.D. has been the required degree, a master's degree in a subject matter field may be acceptable, particularly in the junior and community college.

Pontiz: You could "boot-strap" yourself up by such methods as developing your own reading course to meet your particular needs and goals.

Fabian: It is the purpose of the Center for Continuing Education of Women to assist women with precisely these kinds of questions which are very much of an individual nature. Included in your conference kits is a copy of our participation form. We ask women who have questions of this nature (and others) to fill one out, giving us background information about their education, family, and professional experience (if any) as well as the educational and professional goals they may have in mind and the kinds of assistance they feel they need. If you will fill this out and send it with a letter telling us about your particular situation, we will be glad to try to help you. Usually, it is better if you can arrange to come and talk with us (we'd be glad to have you phone for an appointment), but if you are from out of town and this is impossible, we will try to help you through correspondence. We attempt to help women locate the educational institution which offers the program that best suits their particular needs and which is the most convenient to their homes. The Center was established to help the mature woman get information about academic programs, to refer her to other University offices for special assistance such as admissions, financial aid, testing, academic counseling, psychological counseling, or placement; and to call the attention of the University faculty and administration to some of the special requirements of the mature woman student.

Mrs. Alice Bean (Co-ordinator of Women's Programs, Applied Management and Technology Center, Wayne State University): I have found, in my experience as Co-ordinator of Women's Programs for the Applied Management and Technology Center at Wayne State University, the older women are the best students. They are highly motivated and have a maturity of experience the enables them to produce in the classroom.

How do you write a shart linear program
in your subject matter field?

Ericksen: The University should make available a short course to train people how to do this. It would take most of your time for about one week. On request, the Center for Research on Learning and Teaching will provide a short list of reference materials.

> I do not agree that to take only one course at a time means a casual commitment. Is it necessary to take a certain number of courses in order to be committed?

Shulman: I do not mean to suggest that a part-time student cannot be fully committed to an academic program. I do think, however, that you should be taking enough course work to make real progress. I suspect that after the first term, one course probably would not be enough to make progress and maintain interest.

Black: I received my M.A. degree twenty years after I graduated from college, taking one course at a time, and then one day I discovered that if I would write a thesis I would have it completed. So, I did! I then continued in the same manner with my doctorate. It can be done!

> How much room in Washtenaw Community College will there be for luxury courses - for example, Art History?

Ponitz: No course is considered a luxury course. We take into consideration all kinds of needs for all kinds of people. While it is impossible to make a definite commitment at this stage, new areas will be developed as we move along. Probably 60% of the education will be in the Liberal Arts field with the other 40% devoted to technical and semi-professional training.

> Will faculty members for Washtenaw Community College be required to hold the M.A. or M.S. degree?

Ponitz: We are looking for the best qualified faculty available. In the Liberal Arts, we would want 40-60 hours of subject matter concentration in a teaching field. However, for the vocational-technological areas, we would look for other kinds of qualifications and experience.

> Is certification required for teaching at the community college level?

Ponitz: At the present time, there are few hard and fast requirements for teaching at the community college level.

Since the community college is considered "higher education," the requirements are the same as for four year public colleges.

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SUPLEMENTARY INFORMATION

Teaching is by far the largest employment for the professional woman. The great majority teach in the elementary grades, a somewhat smaller proportion in junior high and high school. But in colleges and universities only about one-fifth of faculty are women. At the same time, the demand for qualified teachers at the college level accelerates each year. The U.S. Office of Education estimates there will be 21,000 new teaching positions in colleges and universities annually throughout the '60's. A serious shortage of qualified college teachers is being faced throughout the country, and in practically all subject-matter areas.

Many administrators faced with finding new teachers still think chiefly in terms of men. But in some quarters the realization is dawning that there is a vast untapped resource among women as college teachers, and steps are being taken to encourage and assist women to enter this field.

There is a basic difference in the preparation of the college teacher from that of the elementary and secondary school teacher, in that the former is first a specialist in his discipline, with teaching often being a secondary consideration. More attention is being given now to "teaching the college teacher how to teach," but the emphasis remains on the degree of excellence which the college teacher has achieved in his (or her!) field. Although a Ph.D. has been a traditional requirement, a master's degree is increasingly acceptable as a qualification for college teaching, particularly in junior and community colleges. The junior and community college may offer especially good employment opportunities for women as faculty because they have more part-time positions, and classes are often held during evening and weekend hours when the woman with family responsibilities may have greater freedom. There is less likely to be prejudice against the woman faculty member in a junior or community college, because their staffs have traditionally included more women than have those of the four-year college and university.

At The University of Michigan possibilities exist for women without the Ph.D. to work as teaching associates or preparateurs - that is, to oversee the operation of teaching laboratories, to teach one or two introductory courses or discussion sections in departments where these may be required for large numbers of students, to coordinate courses where many sections are offered, and to work directly with inexperienced teaching assistants in problems of classroom management; to help adapt and prepare curriculum materials for use with the new technological aids and instruction, to assist with the concentration advising program, which would require not only subject matter excellence but also experience and background in working with students in an academic counseling setting.

Adult education is non-credit education, a form of instruction which provides the satisfaction of working with students who are there because they are highly motivated. On the other hand, these voluntary students are the first to disappear if they lose interest in the class. Consequently, there is an intrinsic challenge in adult education which is often lacking in credit-earning courses.

Adult education covers a wide range of skills and subjects. Courses in citizenship and English are offered for the foreign-born, classes in vocational improvement or in homemaking, and classes in cultural enrichment in many fields. Adult education is available in most communities, often sponsored by the public schools or other agencies such as the "Y" or Red Cross. In Michigan, two large programs are the Mott Program in Flint, spread over seventy-three schools and community centers; and the University Center for Adult Education, a joint program of Wayne State University, The University of Michigan, and Eastern Michigan University, offering courses in Detroit, Ann Arbor, Ypsilanti, and sixteen neighboring communities. Industries and business also sponsor classes in many types of adult education, liberal arts courses and technical training courses. For people employed in management positions, and for scientific and technical personnel, additional training is available in evening courses at Wayne State University's Applied Management and Technology Center.

The teacher of adults should be unusually sensitive to the needs of mature students, who may come from diverse backgrounds. Women with family responsibilities find teaching adult education courses an attractive field because it offers part-time opportunities, with evening hours.

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RESEARCH IN THE SOCIAL SCIENCES AND THE HUMANITIES

Chairman: Myron E. Wegman, Dean of the School of Public Health, The University of Michigan

Panel Members: Eve M. Duff, Personnel Management Analyst, U.S. Atomic Energy Commission, Washington, D. C.
Leah Dunham, Assistant Cashier, Detroit Bank and Trust Company
Garnett McCoy, Archives of American Art, Detroit, Michigan
Stephen B. Withey, Acting Director, Survey Research Center, The University of Michigan

Recorders: Sybil Stokes
Mary Fitts

Hostess: Nancy Sippel

Freedman: The Population Studies Center has hired women for many years. We are glad to have them because we have found that we can buy the talents of an A-1 woman for the same amount of money that would net us a "B-3" man, provided that we can allow the woman some flexibility of hours.

Our Center studies populations here and abroad. We have examined the use of various methods for limiting family planning is related to other factors in a community. For example, we made a premarital pregnancy study in Detroit and are now evaluating family planning programs in Taiwan, Pakistan and Malaya. But fertility studies are only part of our scope. We are also concerned with urbanization and the development of the metropolitan community, with the stratification of the population and movement between strata, with the educational composition of the population.

There is a great shortage of people trained in the field of population analysis. Of the 200 or so requests that cross my desk annually for people to fill these jobs, 150 will probably go unfilled. People are needed with a background in social science, sociology or public health; in statistics; in demography. Also it is helpful to know something about computers. Training in all these areas is not needed for each job, but a knowledge of statistics is especially desirable for any job in this field. The principal need at the moment is for persons with M.A. degrees. Jobs are available in university towns, abroad, and with government agencies. Family planning centers need women with administrative skills as well as a background in public health.

Duff: The National Government sponsors social science research chiefly in the fields of economics, statistics, psychology, education, sociology, demography, manpower and management. It seems likely that these areas will continue to receive aid and have a high demand for trained employees.

The major governmental source of these funds is through the National Institutes of Mental Health. The Department of Health, Education and Welfare's funds are spent through the Public Health Service or passed along largely to universities which do the research. The National Science Foundation does no research of its own but rather sponsors research in the form of grants. The Armed Forces conduct much research in the field of human engineering and psychology. They, the Civil Service Commission, the Census Bureau, and the Labor Department engage in demographic and manpower research. Administrative and management studies are done in many departments of Government, e.g., Civil Service Commission, Bureau of the Budget, and the Small Business Administration.

The Veterans Administration employs 20,000 part-time people, most of whom are either at the lower or the upper grade levels. Abnormal and clinical psychologists are in great demand for the hospitals.

The Office of Economic Opportunity is a new organization of the Government interested in almost every field of social science. It has research jobs to fill in Washington and elsewhere. Another very new agency is the National Foundation for the Arts and Humanities. They will be making grants for post-doctoral study in history, archaeology, education and other areas of humanistic research.

The Atomic Energy Commission, where I work, uses historians, economists, and persons in operations research and labor relations.

The ease of obtaining a specific job with the Federal Government depends on the agency. Most agencies require the Federal Civil Service Entrance Examination. This should not discourage applicants, since it is possible to prepare for the exams by studying past copies, taking a "cram" course or just taking the examination more than once.

Dunham: This is an ideal time to enter the labor market. The economy is booming and women are needed in great numbers. If you decide to return to college to complete your education, you will find an abundance of positions from which to choose when you finish. If you decide to enter the labor market without more training, your chances are about as good. Many companies do their own training so inexperience is no drawback. Decide what segment of industry you prefer, list those companies, and present yourself for an employment interview. I represent the financial field - banking and insurance - and I know what women can accomplish in this area.

Don't hesitate to apply for jobs. Personnel people welcome applicants, so don't overlook the beginning position. All jobs lead somewhere - whether it is up or down is up to the individual. The bank teller's job, for instance, is a beginning position, but from this kind of work have come our branch managers, assistant managers, and many others in executive positions. Teller work is interesting, responsible and provides excellent training. Also, this type of work can be done two days a week or half-time which is suited to the homemaker.

Insurance is another part of the financial field suited to women and with great promise for increasing responsibilities. Today there are women actuaries, underwriters and sales experts. These can be unusually lucrative and satisfying jobs for here you can be of great help to others if you approach the work conscientiously.

McCoy: There are many associations that gather historical documents, index or inventory them, and publicize their existence. The Archives of American Art is one. It gathers manuscript materials in the field of American art: journals, correspondence, sketchbooks, etc., as well as photographs, tape recordings, and ephemeral printed items. It arranges and organizes this material and takes measures to preserve and publicize it and to make it available to scholars.

There are more museums and historical societies than ever before, all of them needing employees. But there is a greater emphais now on professionalism. Many archival agencies require employees with training in archival administration or instruction in the care of old papers. Such skills are not hard to come by. Training in archival administration can be obtained in a one-month summer course in Washington. A certificate from this program plus a background in American history (or some other particular field) should enable one to get a job.

My own interest in archival work came from dealing with historical manuscripts as part of my work as a librarian in a regional history collection. In general, there is a great demand for people with library science training, so much so that people without degrees can sometimes be hired if they have other relevant skills (story-telling to children, for example).

Many museums use volunteer labor, "docents", in their educational departments. Historical societies, too, depend largely on volunteers or pay low wages. They save what money they have for the purchase, preservation, and display of valued objects.

Withey: The amount of turnover in many social research organizations is not great, so there may be few jobs available. The Institute for Social Research cuts across various social science disciplines, thus utilizing people with various backgrounds. The need today is for people more theoretically and technically trained than was the case twenty years ago. The chief needs now are for:

1) research assistants - these are persons with an understanding of the research problems, some technical competence, and preferably an M.A. degree.

2) persons with computer skills - both programmers and others with skill in "talking" to computers.

3) persons with some knowledge of mathematics and statistics.

4) persons with archival experience who can devise and use systems for taped data storage and retrieval.

5) persons with bibliographic skills.

There are few social research institutions large enough to hire specialists in each of the above fields. Instead they look for persons with a package of skills. Hence, if you do not have a Ph.D. but have ability in report writing, statistical or data analysis, bibliographic research, plus a social science background, you can get a job. Any additional skills—

secretarial, language, computer, interviewing—will enhance your qualifications, though they amy not be pre-requisites.

What level of statistical skill is needed for the kinds of jobs you are talking about?

Freedman: If a person had a package of skills, even one statistical course would help; two courses at the graduate level would get you a better job. But these should not be the theoretical courses offered in a mathematics department. They should be the applied statistics courses of the type found in public health schools, economics or sociology departments. You need not have a high level training, but many jobs require some handling of numbers.

Are jobs available for administrative and research assistants on a part-time basis? What would be the salary range for such jobs?

Withey: At least half-time is required to do a reasonable job. Depending on the person's skills, the salary would be about $5,000 to $8,000 (on a full-time basis).

Duff: In these jobs, the AEC generally has people in grades 9-12 which carry salaries of $7,479 and up, with proportionate pay for half-time.

Freedman: If you are interested in an all-round job, it is important to start with whatever is available. The chances for advancement are great, but you need to start somewhere. Salaries can go high, if you have administrative skills.

Withey: There is no calendar for hiring in most social sciences research, so if you take a routine job, you are on the spot and known when other more specialized jobs become available.

At the post-M.A. level, are you interested in people who are not going on to a Ph.D.?

Withey: Yes. We have different positions and titles for the two kinds of persons.

I have known social workers who are now doing work as interviewers. Can you tell me more about interviewing?

Withey: Market research organizations have a great need for interviewers, but this is chiefly done in large urban areas.

Wegman: The University of Michigan School of Public Health uses interviewers, but these are hired for specific jobs, not on a permanent basis.

Dunham: Banks are now making more use of market research. My bank has had a Market Research Department less than one year but we have already felt its impact and know what it can do to assist in the highly competitive sales programs. This will be an increasing endeavor in the future.

What is a teller's salary?

Dunham: The salary is usually about $2 an hour during the training period with scheduled increases after that.

Is a real love of books a good start for library work or archives?

McCoy: It depends on the department. In many areas of library work, there is a lot of detail and administrative work which has little to do with the intrinsic appeal of the books or documents themselves.

Can you tell me more about the Archives course?

McCoy: It is given by the American University in Washington, D.C. in conjunction with the National Archives during the summer and is a one-month course. You go to the National Archives each day and work on a specific archival project. There is also a genealogical research course, for which you get a certificate which can lead to free lance work, though this doesn't pay much.

Is there any way in which the Center for Continuing Education of Women is making this making this "package of skills" available?

Sippel: The Center has been helping women to choose among courses, but it has not offered courses on its own.

Wegman: It would be difficult to offer such a package. It seems to make more sense to let people choose courses that round out their own skills.

Why were there not more women hired in the Atomic Energy Commission project that was talked about this morning?

Duff: It was the old problem of many applicants who don't fit the jobs available. Many of the jobs required particular mixtures of skills. Among chemists, for example, many had the laboratory skills, but not the interest in administration that was needed.

> Refresher courses for women re-entering the job market are available at other universitites and might be tried here.

> With new jobs developing and other becoming obsolete, isn't there a danger that a person will make wrong choices?

Sippel: One of the functions of the Center is to have counselors available to help women make realistic choices.

> Is knowledge of foreign languages in demand in the social sciences?

Duff: The Library of Congress is the only place I can think of where this would be especially useful.

Freedman: If you already know a foreign language, it is salable but don't set out to learn Thai (or any foreign language) to get a job. It would take too long.

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SUPPLEMENTARY INFORMATION

Substantial growth of research in the humanities may be a promise for the future. The National Foundation for the Arts and Humanities was just created in the summer of 1965. It is a latecomer compared to the National Science Foundation established in 1950, which has been so influential in stimulating research in the physical sciences.

Currently, there are scattered research opportunities in the humanities for women in museum work, painting restoration and exhibition, cataloguing of art collections, and in historical studies, but these jobs are not numerous. One outstanding example is the Archives of American Art, a research institution with headquarters in Detroit. Here, a systematic collection is being made of manuscripts, letters and other materials related to American artists and their works. In

Michigan, a growing number of art centers and local historical museums is expected to provide additional openings for women whose talent and education is in art, history, and allied fields.

The 20 or 30 Hour Week - In academic research, such reduced work weeks are common, especially during training. Most other organizations do not wish to employ people for less than the traditional work week, as a matter of policy or administrative convenience. In actual practice, reduced work week schedules may be arranged for the employee who has proved valuable to an organization. There are some current experiments in the creation of job categories that divide a traditional 40 hour job among mature women. Generally, however, the new researcher must anticipate a traditional work schedule.

Top Level Responsibilities in Research - If a woman wishes to pursue independent research or direct her own project, she must become well qualified. She needs a Ph.D. degree in a particular field, such as economics, sociology, anthropology, history, or political science. In the process of her training, she applies her knowledge to a special problem, for example, how people form opinions, how changes in the economy can be predicted, what perpetuates poverty in families or nations, how population changes effect societies. The woman who does not have a clearly defined research interest often develops one during the course of graduate study or supervised research work.

Intermediate Positions in Research - Research enterprises usually involve a number of research assistants, whose work may vary from routine duties to very responsible assignments, depending on the staff needs for the individual project. In colleges and universities, a large proportion of these tasks are performed by students. Mature women may well qualify either as students themselves or as regular employees.

Outside the academic field, research in the social sciences is carried on by public utility companies, banks, insurance companies and other financial institutions, and various foundations and non-profit organizations. One of the newer fields in banking is market research. Inquiries into international economic fields is being promoted by the State of Michigan's new Department of Economic Expansion.

While shortages of fully trained personnel persist, employers will value innate ability and willingness to learn as substitutes for academic degrees. Yet formal basic training in a social science discipline remains the surest path to opportunities for employment.

In viewing job prospects below the Ph.D. level, it is clear that the best opportunities are for a person with a master's degree combined with a knowledge of mathematics and statistics. For the holder of a master's degree without statistical training, government sponsored research offers opportunities. Jobs have been created by investigations of the problems of poverty, urban renewal, community development, and special areas of education. Former teaching experience is often an asset.

Beginning Assignments in Research - The college graduate without additional training can also participate in a research enterprise. Women are employed to conduct interviews for collecting certain kinds of data, and to code the data. They may gather background research material by correlating information from manuscripts, books and periodicals. With additional training, sometimes available on the job, and with experience, movement to more advanced positions of responsibility is possible. Secretarial assistance continues to be an acute shortage. These jobs often provide the initial opportunity for a capable woman who can take on additional responsibilities in administration, technical writing, or research activity. Skill in data processing is needed in all fields or research.

Women who are not ready to undertake any training or employment should consider volunteer activities in the community. In this way they can secure valuable experience in problem areas which are included in social science research projects. Typical examples are political campaigns, zoning controversies, citizen planning, tutoring children or illiterate adults, and promoting community cultural projects.

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RESEARCH IN THE PHYSICAL AND BIOLOGICAL SCIENCES

Chairman: A. Geoffrey Norman, Vice-President for Research, The University of Michigan

Panel Members: Abigail Beutler, Research Associate in Electrical Engineering, The University of Michigan
John R. Gosling, Assistant Dean of the Medical School, The University of Michigan
Alex M. Moore, Director of Research Information and Planning, Parke Davis and Company, Ann Arbor, Michigan
Arthur L. Tackman, Director of Personnel, United States Atomic Energy Commission, Washington, D.C.

Recorders: Lola Borchardt
Pauline Nelson

Hostess: Helen Tanner

Norman: We are all aware of the enormous growth of scientific research in this country during the last decade. Research activity is widely distrubuted in our economy, in university, government and industrial laboratories. Right now, there seems to be a tendency for aggregations of research organizations to form around university communities, separate from factories and production units of the same firms, but close to the sources of research personnel. This has occurred in Ann Arbor, with development of Research Park on the south side of town, and the establishment of special divisions of such firms as Bendix and Parke Davis along Plymouth Road. Instrumentation, the widespread use of special devices and equipment requiring skilled technicians, is the factor that makes the big difference in modern research.

In deciding how to prepare for work in a research organization, you need first of all to have some idea of what you would like to do there. Then, the question is: Will formal courses be helpful? Do you need to take university courses to up-grade skills, or should you anticipate on-the-job training? On the campus, there is no single hiring-hall for the research aggregate. Staffing of research projects is not done solely through the personnel office. It takes initiative and ingenuity to get a start. You need to make an individual approach to a department or institute. Part-time jobs are available for the research associate or technician. There are approximately 2900 research employees of the university in addition to all the students that are working on research projects.

Tackman: Research opportunities in the federal service are as broad as the chart. The big problem is how to find out which agencies have jobs available. Each agency has its own hiring procedure, but many of the jobs are through Civil Service. Numerous pamphlets and other forms of information are available from the regional office of the U.S. Civil Service Commission in Chicago. For example, I have here announcements of jobs with the Weather Bureau for meteorologists, for biochemists with the Bureau of Standards; and there are many opportunities for chemists in Michigan as well as in Indiana, Ohio, and Illinois. From this same office, you can secure a list of the principal Federal establishments in Michigan with information about jobs at specific locations.

The U.S. Civil Service has an aggressive program only six months old. At present, the examination system is being reorganized. The regional offices will have information centers and very soon, one of these new information centers will open in Detroit. An examining board will be located there, too. Agencies differ greatly; they may be hard-working, flexible, or bureaucratic. Written examinations are not always used; your application blank may be your "examination paper." Panel interviews sometimes serve as the examining procedure. Competition is not great in the technical areas. Do not be afraid of applying, you may be agreeably surprised!

Also, there are many non-laboratory jobs where a technical knowledge can be used, for example, as a writer, editor, or historian, and in EDP,* science administration, and in management, too. On the other hand, in the Federal Service there are not as many "R and D",* or "hardware" jobs available, but there are some in NASA, the National Institutes of Health, the Bureau of Standards, the Bureau of Engraving, and in some of the smaller labs.

> In your speech this morning, you implied that the Atomic Energy Commission provided in-service training. Is this true?

Tackman: Yes, we have had about four or five thousand applications. Of these about 200 were processed, and fifty hired for the part-time program. We fill about 400 full-time professional positions each year. The training program is generally a "back to the university" arrangement.

Norman: I should call your attention to two new Federal agencies in Ann Arbor, the Laboratory of the Bureau of Commercial Fisheries and the new Great Lakes Water Laboratory.

Moore: Since I am the only representative of industry on this panel, I should like to point out that about twenty billion dollars is spent in the United States each year on research and development, and two-thirds of this spent for research carried out in private industry. Industrial research and development is about 75% development, for example, for the actual manufacture of prototype rockets and airplanes, and about 25% research. My own interest is research and development of new drugs.

The United States spends about a billion dollars a year on medical or health-related research and development. The pharmaceutical industry supports a third, over 300 million dollars. Parke Davis is a firm which began a hundred years ago in Detroit, and a part of the research division recently was located in Ann Arbor. This division expends about fourteen million dollars annually and employs 850 or 900 research personnel.

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*Electronic data processing

*Research and development

You probably would like to know what kinds of research Parke Davis does. First of all, we work on the development of drugs to combat diseases for which there is now no satisfactory treatment, such as arthritis. We have worked on this problem for fourteen years, and have developed a product which has been marketed abroad for three years, but the Food and Drug Administration has not yet authorized its use in the United States. Then, we are searching for pain-relieving drugs which do not cause addiction, the problem with morphine. Another group at Parke Davis is concerned with hormone-like drugs, such as "the pill" and different hormones important to reproduction, growth, metabolism and normal body functions. Cardiovascular and renal disease are another research area, in which attention is given to kidney disease, high blood pressure, blood clots, and degenerative diseases, such as abnormal rhythm of the heart and atherosclerous. We have a laboratory section devoted to drugs that affect the central nervous system. The best known Parke Davis drugs in this area are used for the treatment of epilepsy. Another example of the work on central nervous system drugs is our work on anesthetics and drugs that cut off the ability to perceive pain. The first clinical studies of one of our anesthetic drugs were actually done in cooperation with the University of Minnesota investigators and at The University of Michigan Hospital. In Detroit, our firm has a unit devoted to the preparation of vaccines. Parke Davis has also been a leader in the chemotherapy of disease, the development of antibiotics, and in the treatment of tropical diseases such as malaria and pin worms.

Right now, our greatest need is for experts in synthetic organic chemistry. We also need medical technicians. A new pathology laboratory is now being built, and work in this area includes hematology and blood chemistry. We always need biologists and zoologists for laboratory work, and biostatisticians who can understand computer programming. Then, we also use medical writers and people who can cover the scientific literature and extract from it information important to our research. This requires rare judgment. Occasionally, we need an additional science librarian. At present, we have four professional staff members in our library, and we have sometimes waited two or three years to get a qualified person.

Are there any part-time jobs?

Moore: In general, our employees work full-time, from 8 to 4:30. The one exception is the tour guides who escort visitors through the labs.

Is it a real forty hour week, not involving extra time and effort?

Moore: Some people take work home. My own work is closer to 60 hours a week.

Maybe if a job is over and can be put down at 4:30, it is "part-time."

Moore: You find that you become obsessed with a job, you know.

Sometimes part-time employees put forth more concentrated effort than full-time employees. But I wonder, will professional competition force you to work more?

Beutler: I feel like a monkey in a cage, because I guess I am an exhibit of the kind of thing we have been talking about today. As an undergraduate student, I was not particularly dedicated. But I did work two years at North American Aviation before having a family. Then, as a Radcliffe alumna, I was deluged with literature from Mary Bunting, president of Radcliffe, about the importance of using one's education. By that time, I was rather restless and not completely satisfied with keeping house and changing diapers, so I returned to school at The University of Michigan to get a master's degree in physics. This took a year and a half, and I finished as a full time student in order to get my degree before our third child arrived.

Very shortly, I was feeling like "climbing the walls" again, and I talked to everyone I met on "the cocktail circuit" about wanting to work. This is really a very good way to get a job. Within a month, I had three offers for part-time jobs. I went to work in the radio-astronomy observatory and secured on-the-job training. Last year, when my husband was on sabbatical leave at the University of California, I finished an additional master's degree in electrical engineering at Stanford University. Now, I have a three-quarter time job, with flexible hours, in space-physics. The children have learned to assume responsibility and are really very independent.

Did much of your knowledge disappear
while you were away from school?

Beutler: Yes, some of the things I had learned were on longer true. The more advanced the course, the more obsolete was my information. For example, I found a completely new approach to classical mechanics. The first bluebook was mortifying.

How long had you been out of school?

Beutler: Ten years. It is true that it is rough at first, but motivation is in your favor. If you are working for knowledge, and not just grades, then you do better.

Maybe, then, there is hope for me.

Gosling: About 80% of my time is spent with women as a practicing gynecologist. Perhaps 15% is devoted to research. Some of my medical center colleagues are more involved with research, and some less, than I am. Just to illustrate the current needs in medical laboratories, I'd like to read a recent memo from the Medical School indicating that there are twenty openings for research positions. We could even use someone for two hours in the evening. The situation is so critical that recruiting must be carried on among current college seniors, where competition is very keen. The true gem for medical research, almost unattainable, is a person with a knowledge of biochemistry, microbiology, and tissue culture. We don't have enough such people at the moment to meet the need for regular medical care. This is one reason we want the new community college* to train medical technologists.

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*Washtenaw Community College opens in September, 1966.

For one of my own research projects, in placenta morphology, I first taught a girl to do injections, and the microtechnique for tissue specimens. The training took six months. Another project, which is just coming to a close, is a five year study of the attitudes of new parents toward the first baby and the problems encountered during the first pregnancy and the first six weeks after the baby is born. It requires rather tricky interviews. The staff includes three people, one a nurse with an R.N. degree who both aided in creating a questionnaire for the husbands as well as the wives and also learned survey research techniques on the job. A half-time secretary did the coding and transcribed the tape-recorded interviews with the wives in the eighth month of pregnancy and again in the home six weeks after childbirth. There was a second part-time secretary on this project also. The knowledge required for both these projects cannot be obtained in formal courses -- there are no such courses. I am looking for permanency in my staff, and maturity would be desirable. A lot of pirating goes on between projects.

What happens to the staff when a project is over?

Gosling: New ones keep coming up; in fact, they seem to be self-generating. The nurse in the project referred to has four job offers.

How does one start to find such openings?

Norman: Start with the department, if possible, in your field of interest; and ask about research projects and the possibilities of training.

Beutler: An Ann Arbor resident has an advantage over graduate students. She'll be here longer and can provide valuable continuity in a research project. That is what I was told when I was hired.

Gosling: Sometimes an individual sparks a project. If a person showed up with an interest that matched mine, then I would look for money to support the project because I would know I had someone to work on it.

Now, in 1967 or 1968, the new Medical Science II building will be opened. We could use someone with museum training and some medical knowledge to arrange a display of some of the items we have stored away in the basement. We have all the Coller Collection and other things that are really very important in the history of medicine.

> I think I know of two medical technicians that might be available.

Tackman: I am certainly impressed by the candor here, and by the lack of satisfactory communication. Does the Center have some help to offer?

Tanner: We have requested information on jobs from heads of all departments, institutes, and independent laboratories. This data is available at the Center. I believe that Dr. Norman has a directory of projects compiled by the Office of Research Administration, too.

Norman: Yes, we have that, but it would not be helpful from the standpoint of available openings. For some, knowledge of specialized equipment is required, for example, electromicroscopy. Actually, matching the person to the job goes on in a rather informal fashion.

> New people really have a problem. I'll bet most men would be discouraged if they had to go through this process.

Norman: Many of these jobs we are talking about are outside the budgeted department system, and therefore not listed as vacancies.

Beutler: If you are working on a research project in the University, you can soon propose your own line of research and get financial support. I started out as a "jack-of-all-trades", but with information from the Mariner IV fly-by, solar wind measurement, and other experiments, I am working with support from NASA on a hypothesis regarding the atmosphere on Mars.

Gosling: Of course, research is not all drama. In medical and biological research, you are often required to repeat a given observation almost "ad nauseum".

Norman: To be able to repeat a procedure with accuracy and precision - that's what makes a good research assistant!

> Can a better system be devised for information exchange about jobs?

Norman: Since Ann Arbor is the center of growth of new laboratories, and with the medical center explosion, some system will probably evolve.

Beutler: The Center for Continuing Education of Women is needed to help match available women to jobs, and to combat prejudice against part-time work on a professional career.

> What is an adequate background?

Norman: A bachelor of science degree.

Gosling: This is helpful but not absolutely necessary. I think the ability to be trained is of first importance.

> Can you be overtrained? I ask because I have an M.S. degree in chemical engineering, and I am going back to school to get a Ph.D. because I could not find a job with only a master's degree.

Gosling: Overtraining could be a problem with reference to some kinds of jobs. I would be reluctant to hire someone who was too highly qualified, for fear she might be bored, or that the pay would not be adequate.

> The pay scale is not of primary importance, really.

Beutler: I'd like to add that it can be very important for you to take courses for credit at the University, first of all to show your intention and your dedication to some field. Also, this gives you a chance to test the strength of your motivation.

> Where can we go to assess our own situation?

Norman: Probably you should start with counseling at the Center for Continuing Education of Women.

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SUPPLEMENTARY INFORMATION

The national excitement about scientific advance in the last ten years has been one of the favorable winds stirring up more research jobs in the physical and biological sciences. This research is performed in government laboratories, private industrial firms, and in educational institutions - often with considerable financial support from the federal government or private concerns.

During the past year, almost 48 million dollars was spent in research activities at The University of Michigan; of that total, 38 million came from various branches of the national government, while two and a half million came from industry, related societies and associations. The number of University employees involved in research projects for this period is established at 1510 academic and 2915 non-academic research personnel. (These figures do not include teaching faculty and students.) In taking a panoramic view of research opportunities within the Ann Arbor and greater Detroit metropolitan area, one should note the concentration of research in medicine (with emphasis on biology, chemistry, and physics), the number of small electronics firms, and the projects concerned with various phases of the automotive industry.

For the mature woman who prefers work in a laboratory or association with a research team, job opportunities depend on her particular combination of formal education and research skills. To secure a research job, a woman may find it profitable to consult the research administrator or scientist directing a research project. Of course, the big demand is for people with high-level competence and recent training. On the other hand, a woman may enter the research field as a laboratory technician or a statistician. Many new instruments permit assays or measurements to be made quickly and accurately if used by skilled personnel. A facility in mathematics or data processing can be used in all forms of research work.

In laboratories, it is important to be familiar with modern techniques, and "on the job" training is often provided for new employees. For example, a woman may qualify to perform only routine lab work at first, but soon masters a new technique while conducting experiments under supervision. If she proves capable and valuable to the organization, she may be encouraged to take additional courses in preparation for assuming a more responsible position. Many firms pay the tuition of employees who improve their competence by formal academic study, or by taking non-credit courses.

Work Schedules - Methodical research in most scientific fields is organized to conform to the traditional work week.

The length of an experiment often controls the time schedule in laboratories. Opportunities for part-time work not requiring extensive training seem to occur in small, new firms needing the alert, adjustable employee who has minimal scientific background, but who can "grow with the company."

In independent and theoretical research, time schedules can be adjustable, since the objective is to complete a research assignment or make reasonable progress with a specified time interval. A woman should not expect to engage in independent research unless she has developed some special field, and probably needs to have a doctor's degree or some training beyond a master's degree. But one of the rewards of advanced education is the privilege of flexible working hours.

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SUGGESTED READINGS

Careers for Women in the Biological Sciences. Women's Bureau, U.S. Department of Labor, Washington, D.C. 40¢

Careers for Women in the Physical Sciences. Women's Bureau, U.S. Department of Labor, Washington, D.C. 40¢

Institute for Research, 537 South Dearborn, Chicago. 95¢ each:

- Careers for Women in Scientific Fields
- Botany as a Career
- Careers in Astronomy and Related Space Sciences
- Careers in Geophysics and Geochemistry
- Biochemistry - Scientific and Teaching Careers
- Nuclear Science Careers in Industry
- Research Careers in Chemistry

Wachs, Theodore, Jr. Careers in Research Science. N.Y., Henry Z. Walck, 1961. 96 pp. $3.75

ADMINISTRATIVE AND STAFF POSITIONS

Chairman: Anthony J. Procassini, Director of Industrial Relations, Bendix Systems Division, Ann Arbor, Michigan

Panel Members: Joseph C. Augustine, Manager of Employment Services, Personnel Office, The University of Michigan.

Elrie Chrite, Executive Director, Washtenaw Office

of Economic Opportunity, Ann Arbor, Michigan
Robert C. Deane, Manager of Central Placement Services Department, The Ford Motor Company, Detroit, Michigan
Joseph A. Frisinger, Director of Personnel, City of Ann Arbor, Michigan
Jean LesStrang, Vice-President and Corporate Treasurer, LesStrang Advertising Agency, Ann Arbor Michigan
Recorders: Dorothy Bell
Ruth Williams
Hostess: Georgia Watermulder

Deane: At The Ford Motor Company, we look for three general kinds of skills: 1) educational 2) experience and 3) general skills, by which I mean intelligence, maturity, a sense of responsibility, character, personality, initiative, and poise. I want to underline the importance of poise. Any interviewer will look for these general skills and consider them as important as the other skills. For secretaries, we require minimum standards of 60 words a minute in typing and 80 words a minute for shorthand plus good scores on clerical aptitude tests. Clerks are required to score well on clerical aptitude tests in addition to possessing typing and other skills. In the professional category, we look for proficiency and good academic preparation for the position being filled.

Many applicants fail to get beyond their initial interview simply because they have not made proper preparation. I suggest that you:

1) do some research on the company to which you are applying for a job.
2) have some idea of the kind of job you are applying for.
3) think about how you might fit your skills into this operation.
4) most important of all, practice interviewing with somebody until you lose your initial nervousness and present yourself in your best possible light.

Chrite: The Economic Opportunity Program provides many creative part-time positions for women, particularly in large metropolitan areas. We need people who can write, who can do statistical research, who have secretarial and adminsdtrative skills. There are such jobs as instructors and directors of neighborhood centers and also teachers in the Head Start Program* for an eight to twelve week period. Opportunities for employment of women are especially good in Economic Opportunity* offices because the program tries to break away from certain molds. Educational requirements and working hours, for example, are not so stringent as in many other situations. As the program expands, we will need people who can get the job done.

Augustine: A great variety of challenging jobs are available at The University of Michigan. In the Personnel Department, we are giving increased attention to regular part-time jobs at the University. Requests that come to us about job vacancies frequently express a preference for mature women. At the present time, the University has 8400 regular non-academic employees (non-teaching, supporting staff); 4000 academic people (teaching staff and top level research); and 6000 temporary workers.

The non-academic employees range from able-bodied seamen on the four University ships on the Great Lakes to glass blowers. Office workers form the largest group of non-academic employees. There are about 3000 secretaries and clerks. Administrative assistant positions are increasing in number and, at present, women administrative assistants outnumber the men. These assistants are the liaison between the business offices and the academic units of the University. Secretarial skills are required in some offices, but not in others.

In looking ahead to a growing number of people coming out of secondary schools and a greater emphasis on training beyond high school, we will have more and more students wishing to enter colleges. This, in turn, will mean an increasing demand for staff. We expect to expand the non-academic staff from 8400 to 12,000 between now and 1975.

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*Project Head Start is a division of the Office of Economic Opportunity, established by the Economic Opportunity Act of 1964. As of February 1966, Community Action Programs were in operation in twenty-five Economic Opportunity offices in Michigan. Information about them can be obtained by writing to Mr. Arthur W. Saltzman, Michigan Economic Opportunity Office, 7310 Woodward Avenue, Room 615, Detroit, Michigan 48202.

Colleges and universities are good places to look for interesting, challenging jobs. We haven't done all we can about putting across the concept of part-time assignments for many jobs. We are trying to make supervisors increasingly aware of good part-time help in offices where they have regular coverage and can use people who can work half-time or part-time. We need to communicate with women who have been away from the labor market about these jobs and make more part-time jobs available to the mature woman.

Frisinger: A question that should be answered before deciding to look for a job is "What is my reason for wanting to join the labor force: boredom? money? a desire to be creative? a desire to serve others?" City government does not offer a great deal of money, but jobs at City Hall can be exciting and offer an opportunity to be creative and a serve others.

Although women may have special talents in certain fields such as public relations, they will be welcomed in any part of city government except the Fire Department. City planning is a field where the mature woman who long has had an interest in community affairs could use her skills and experiences. We now have a woman city planner for Ann Arbor. Her starting salary was $7,000, and now, as a senior planner, she is making $8500 which will increase to $10,000. There are jobs as administrative assistants, budget analysts, sanitary engineers, policewomen, editors, and writers. If you have talents and training in any of these fields, we would be glad to talk to you.

LesStrang: In advertising, there are many interesting jobs for women, such as account executives, space and time buyers, commercial artists, researchers, librarians, proof-readers, administrative assistants, or copywriters. Women do well in promoting products sold exclusively to women. There are also jobs in the related fields of television and radio.

More and more women are combining careers with homemaking. As the mother of four children from three to fourteen years of age and vice-president and treasurer of an advertising agency, I know that it is possible to be a homemaker and still have a career. It can be done, but it takes careful planning. In my own case, I am backstopped by help at home. Also, we have definite, pre-arranged plans to cover the unexpected: Plan A goes into effect for one eventuality, Plan B for something else. We also have an office at home linked to our other office with an intercom system. I plan to be at home at lunch time and when the children come home from school, for I believe that a woman's first allegiance must be to her family. If your husband does not want you to work, don't try it—at least, not until you have won him to your point of view.

Be sure to know what talents and skills you have to offer when applying for a position. Be willing to learn other skills on the job as they are needed. Turn off the job when you go home. Learn to delegate! You can't do all your own baking, be a gourmet cook, sew on all the patches and hold an outside job. Don't try to be 100% in everything; settle for 75 or 80%.

Procassini: I am the father of nine daughters and so have a special interest in opportunities for women. There are many jobs in a research and development organization such as Bendix that are open to women on either a full or part-time basis at all levels in the structure. Bendix now has six divisions in and around the Ann Arbor area. The Systems Division alone has 200 women employees. We are always looking for people with clerical skills, scientific skills, semi-professional skills, illustrators and editors. Although our greatest demand for women is as clerks and secretaries, Bendix also employs women as engineers, computer programmers, engineering aides, key-punch operators and assemblers. I believe that the numbers of women employed by industry will grow and that the work week may become shorter. The thirty-hour week is coming. If this happens, it will tend to make part-time work for women seem less of a privilege.

> I work for an employment agency and find that it is difficult to place women in industry when they can work only fifteen to eighteen hours a week.

Deane: Our part-time jobs are usually jobs which last a short period of time on a full-time schedule rather than job scheduled for a reduced number of hours per week for an extended period.

Procassini: Bendix frequently hires programmers or engineers for less than an eight hour day. Either clerical or top professional people are hired part-time, but not the middle levels.

> Do you think that a mature woman can do more in a four and a half hour day than a beginning youngster working an eight hour day?

Deane: We have no objection to hiring mature women, but I can't agree with Mr. Rehmus* that there are advantages to hiring on a part-time basis. I much prefer to hire a woman full time. An eight hour day is standard for women at Ford, not half days. This is due to the demands of this particular industry.

LesStrang: Our agency sometimes hires women who start at 8:30 A.M. and finish at 3:00 P.M. One of our secretaries is the mother of two young children and works four days a week.

Augustine: Many people work more efficiently on a shorter work day. It is easier to fit a half-time worker into a group project where some of the full day duties, like answering the phone, can be performed by other members of the team.

> Suppose a woman has no particular skills and wants part-time work. Will she receive on-the-job training?

Procassini: We need specific skills. Most companies can not afford on-the-job training.

Deane: If you qualify for full time employment, Ford sometimes pays for additional training at a nearby school or university.

Watermulder: As a member of the staff of the Center for Continuing Education of Women, I would like to point out that one of the functions of the Center is to put women in touch with courses of all kinds. There are many training possibilities in the Ann Arbor and Detroit area. One of them is the Applied Management and Technology Center of Wayne State University, founded with the support of leading industrial firms in the Detroit area; non-credit evening courses range from data processing, office management, basic accounting, to marketing and personnel management. In our office many catalogues are available for reference, and one of our aims is to assist women in acquiring saleable skills.

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*Charles M. Rehmus, Commentator, Morning Session. See Ante, page 39

Does Ford hire through employment agencies or by personal interview only?

Deane: We hire both ways. The agencies do not know of all our job openings. I would like to comment on temporary positions. We often use them as a way to measure a worker's potential. Frequently the temporary worker becomes a permanent employee.

How do you obtain jobs in city government?

Frisinger: We do not have to advertise every opening because college graduates come to us. But let me add here a word of advice! Don't sit back and wait after you have put your name in one or two places. To find what you want may take quite a bit of perseverance.

Chrite: Information about job openings is frequently exchanged between agencies.

Are not placement services in schools and colleges also available?

Webber (Miss Mildred Webber of The University of Michigan Bureau of Appointments): We get all kinds of requests for people from companies all over the country. We advertise some of the openings in the campus newspaper, the Michigan Daily.

Is industry getting over its reluctance to hire mature women?

Procassini: An employer must consider all who seek employment, but there must be a fit between skill and job. In addition to having the required skills, a part-time employee must be mature in her approach to work. She must have a sense of responsibility and be willing to work hard. When given a task, she must demonstrate her ability to complete it in a minimum amount of time.

Chrite: In the Medicare Program, the government stipulated that the temporary jobs be given to men and women sixty-five or sixty-six years of age. They do a fine job.

> Does the University hire retired people part-time?

Augustine: The University of Michigan's mandatory retirement age is seventy, which is higher than that of many business and other enterpises. At times, we hire people who have retired from jobs outside the University.

> If you wish to return to the labor market after twenty years' absence, where can you get pertinent information?

Procassini: From the Center for Continuing Education of Women or from state employment offices or Equal Opportunity offices in various communities and from reading the newspapers carefully. Newspaper articles give you clues about new companies being formed or moving into town, new programs like Headstart, and job openings in the public schools.

> For twenty years I have been searching for an interesting job in the Want Ads. Only once have I found it. Why are most of the ads for baby sitters and cleaning women?

Frisinger: Only a fraction of job openings are placed in the Want Ads. They are not representative of the demand in the community. So don't limit your search to the ads.

> Most of us who have been out of school for ten or twenty years are frightened by tests—psychological tests, typing tests, civil service examinations. How much importance do you put on these tests?

Frisinger: In the City Personnel Department we do not give any tests to women except to policewomen.

Procassini: Bendix does not use tests except a clerical skills test for applicants in that field, but this varies from one company to another. Most psychological testing is done for very high level executive positions.

Deane: Tests are not used in all areas, but in sales we find a strong correlation between test scores and success.

Augustine: A college degree is usually accepted as a measure of the applicant's educational abilities.

> The YWCA in Detroit has a course in taking Civil Service Examinations which is designed to give information and to allay fears. If women are afraid of tests, they might take a temporary job and prove their worth in that way.

Watermulder: Before our chairman adjourns this discussion for the Round-Up which follows, I would like to urge you to bring your questions to the Center for Continuing Education of Women, where our counselors are prepared to assist you with vocational and academic problems. So many fields in business and industry fall within the scope of "Administrative and Staff Positions" that it is impossible even to mention them in this short time. A bank officer is on another panel today, and I want to call your attention to the increasing opportunities for mature women in all financial fields—banking, trust companies, and insurance company home offices—personnel work, research assistance, library work, writing jobs, and management trainees. Real estate, utility companies, and museums are other possibilities. Do help yourself to the career booklets on the tables on your way out and come to the Center if you need our assistance.

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SUPPLEMENTARY INFORMATION

Administrative and staff positions extend from company presidents down through departmental managers and the supporting staffs of assistants and secretaries. Duties include some of the following tasks: interviewing, testing, training, and supervising personnel; compiling and analyzing data; dealing with the public by correspondence, telephone, or in person; office management and maintenance. A significant current trend is the number of new administrative and staff positions in government, educational and financial organizations.

Entry Jobs

The trained secretary is in great demand. Shorthand is no longer indispensable, since an increasing number of executives are using dictating machines. The ability to type and keep accurate records, and a sense of organization are vital tools.

Without secretarial skills, a woman can still find other routes to interesting jobs; service representative in a telephone company, interviewer in a personnel department, passenger agent for an airline, credit and collection work, test administrator in an employment office, travel agent, museum assistant, housing manager, fund raiser. Data processing can be learned on the job or in a short training course; a math degree is not always necessary.

Prospects for "The Returner"

To capitalize on past experience (even though it may seem distant), a woman entering the present "labor market" needs to know what companies, government organizations and educational institutions can use mature, college-trained women in various staff capacities. The types of jobs indicate considerable diversity.

In southeastern Michigan, as in other parts of the United States, educational institutions are accepting more students each year, and as a result require not only more faculty but additional staff outside the teaching ranks. Some of these jobs are in direct support of the instructional program. For example, large academic departments need administrative assistants in the offices of departmental chairmen. It may be an advantage for a woman to be familiar with the particular academic field, but most frequently department heads express the crying need for an intelligent person who can keep an organization running smoothly. A departmental assistant is usually a full time job, requiring some secretarial ability.

Educational institutions have record-keeping systems which are very complex in the case of a large university. In community colleges and other small schools, a woman may be the registrar in charge of academic records, or a controller who oversees financial accounts, or an admissions officer. Such positions would probably be achieved after considerable experience. Another large category of non-teaching jobs is in the field of student counseling: admissions, financial aid, housing arrangements; or problems that are personal, religious, academic, or social in nature. A large campus usually has a special office for assisting foreign students.

All government work is increasing, even at the local level, bringing opportunities for jobs in urban renewal and other projects of municipal improvement, as well as city planning. (Detroit has a staff of 80 in the city planning department, and The University of Michigan offers graduate training in this field.) For the new Medicare program, interviewers are needed in Social Security offices. Mayors and City Managers are looking for people who possess, or can acquire, familiarity with recent federal legislation allocating funds for use at state and local levels. Promotion and public relations also figure in government staffs. Because of budget limitations, part-time and supplementary jobs are more common in local governments than in business firms, unless time schedules are restricted by specific civil service regulations.

The relocation of many business firms in suburban areas makes jobs more accessible and appealing to homemakers. Good fields are sales, personnel work, and public relations. There are many insurance company home offices in southeastern Michigan, many of them rather new. In the Detroit area, women are branch bank managers, and across the country, financial institutions offer fine positions for women. The smaller businesses offer mature women greater opportunity for advancement. Top-level secretaries are close to management sources of business information and can take on executive responsibility. A college education is a great advantage. Her chances may also be improved if she completes special courses in academic and technical subjects offered by industry and in non-credit evening schools. In general, a woman's future in administrative and staff positions depends on the organization, its size and policies. Ability to deal successfully with associates is essential to managerial promotion.

Work Schedules

The percentage of part-time jobs is small but increasing, and the average work week is becoming shorter. In finance, insurance and real estate, the full time worker average 37.2 hours a week in 1962.*

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*Kruger, Daniel, "Women at Work", The Personnel Admistrator, July-Aug. 1964, p. 12.

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SUGGESTED READINGS

Employment in Professional Mathematical Work in Industry and Government. National Science Foundation 62-12, Government Printing Office, Washington, D.C., 82 pp. 55¢.

King, Alice Gore Career Opportunities for Women in Business. N.Y., E.P. Dutton and Co., 1963, 212 pp. $4.50.

Occupations in Electronic Computing Systems. U.S. Employment Service, Government Printing Office, Washington, D.C. 20402. 1965, 72 pp. 30¢.

Occupational Guide to Public Relations. Public Relations Society of America, 835 Third Ave., New York City 10022. 24 pp. 10¢.

Seymour, Dan. Advertising - World of Demand. Address before the Economic Club of Detroit, 1964. Available free from J. Walter Thompson Co., 420 Lexington, New York City.

Institute for Research, 537 S. Dearborn, Chicago. 95¢ each:
Administrative Positions in City Government - Careers
Advertising as a Career
Airline Careers for Women
Business Administration as a Career
Careers in Banking
Careers in College and University Administration
Careers in Life Insurance
Career as a Medical Secretary
Careers in Museum Work
Careers in Tourist and Travel Agencies
Careers for Women in Office Work
Executive Careers for Women in Department
Stores Hotel Management and Motel Operation as a Career
Merchandising as a Career
Personnel Work in Commerce and Industry as a Career
Women in Managerial Positions in Business

ROUNDUP

Jane Gibson Likert, Conference Chairman, Center for Continuing Education of Women, The University of Michigan

We chose the subject matter and emphases of this conference to try to answer the questions of women coming into the office of the Center for Continuing Education of Women as to what were the most promising fields of employment for the mature woman who could work only a twenty to thirty hour week because of continuing family responsibilities. These women wish to resume their interrupted formal education or enter new fields, but they want to be trained in some area where their services will be needed and welcomed.

To get a realistic picture of the employment opportunities now in existence or in prospect over the next few years, we tapped the knowledge and experience of Dr. Eva Mueller to give you a nationwide view of women in the labor market and some very sound advice. Mr. Arthur Tackman, who has developed an interesting experiment in hiring women part-time in the atomic energy installations, has described his experiences. Dr. Charles Rehmus's comments have clarified the picture further. Dean William Haber's view on how to accommodate to change touched on one of the most important problems in life.

The afternoon workshops were designed to give an indication of the kinds of jobs available in a given area. We wanted to find out about actual jobs so that we would know "what was really there and not just what would be nice", as a member of our Executive Committee put it. To prepare for these workshops, letters went to the heads of all departments, schools, colleges, institutes, museums, laboratories, and libraries of The University of Michigan, asking for information about the nature of the jobs in their enterprises, the training required, the hours and the salary scale. Letters also went to governmental agencies and selected firms in the area. A report of our findings will appear in our conference proceedings.*

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*See Appendix

Certain differences in perceptions became evident as we examined the replies. The women who come to the Center to ask about the most promising fields of employment must differ from those seen by many employers. For the most part, we see women interested in being trained for a profession in which they can work, once trained. This usually means a profession offering a part-time or flexible schedule. Many employers seem to assume that women looking for part-time employment must be frustrated housewives looking for a way out of the kitchen. This may be one motivating force, but surely not the only one.

Some of the employers' responses reminded me of one Art Buchwald's columns. He described a husband coming home to find his wife baking bread and the children happily playing. "What are you doing, making bread?" he said. "You must be frustrated." At first she was furious, but then one day he came home to find the children running around the house, everything at sixes and sevens, no supper in prospect. The phone rang. It was his wife, saying "I decided that you were right. I have found my fulfillment in the basement of Sears Roebuck between the potholders and the dishtowels and I won't be home 'til after six."

We also discovered that certain words call up what seem to us strange reactions. "Part-time" work appears to mean, to some persons, erratic hours at intermittent periods of time and carries the connotation that those who want to work "part-time" cannot be very dedicated workers. We tried all sorts of other words and phrases, "the twenty to thirty hour week", "less than the traditional 8:00 to 5:00 day", and found that "the shorter work week" is fairly satisfactory. This implies that soon everyone may work that kind of week, so that a woman who must work that amount of time will not seem such an irresponsible oddity. Even this is not perfect, for it chills some employers who see their whole work force putting in fewer and fewer hours or more overtime, which is expensive. Just this week another term was suggested by one of our panelists which may solve the problem: "a joint appointment—home and job".

The real trouble is that there has been very little research and few experimental projects to discover the advantages and disadvantages of part-time versus full-time work. The willingness of employers to hire women part-time is determined largely by their own individual experience in hiring on that basis. If they have had bad luck, they hire women part-time only if they are desperate for help. If they have had good luck, they are convinced that the part-time market has superior women whom they could never attract on an 8:00 to 5:00 schedule. Some of them have never tried hiring on this basis at all.

If part-time jobs are to increase in any number, new patterns of employment must be found. We can cite one or two innovative ventures. You have heard Mr. Tackman describe one this morning. Then, an experiment in partnership teaching in the elementary grades has been in operation for about a year in the Massachusetts public schools.* A preliminary report indicates that one of the advantages already evident is the reduction in fatigue in both teachers and children. If one teacher continues all day, fatigue overtakes her in the afternoon and the children respond with fatigue and irritation. A teacher who comes for the morning period has given her best by noon. Then, a fresh teacher comes in to give her best the other half of the day. All innovative ways of dividing the work week merit watching. Employers will be much more willing to try hiring women part-time if there are real advantages for the employer.

There is very little research, but a great deal of folklore, on the advantages and disadvantages of hiring "mature women". Here again, employers' attitudes are determined by their individual experiences—sometimes their sample is one. Some believe that a woman in her fifties is a poor employment risk. She may be subject to illnesses or in other ways begin to fall apart. (Many women in their forties who come into our office are sure that their brains must have congealed and that they no longer will be able to think after a long absence from academic halls.) On the other hand, some employers find the mature woman a more dependable employee than a younger woman. She is usually a permanent resident of the community and will not move away just as she has become valuable to her employer. She is more highly motivated to do a good job.

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*Partnership Teaching Program, Women's Educational and Industrial Union, 264 Boylston Street, Boston, Massachusetts 02116

One employer at The University of Michigan has found what he considers a gold mine in women who have had rich experience in other parts of the University, but who have now retired from these jobs. We asked him if he would consider hiring anyone under seventy and he said, "Not if I can help it." But he relented and agreed that women in their sixties might do.

The panelists in the afternoon workshops were employers from business, government and institutions of higher education. At least one woman holding a part-time job was included in each panel as living proof that it is possible to combine work and home successfully, particularly if one is innovative.

The local part-time employment picture is quite similar to the national picture that Eva Mueller painted for us this morning. The opportunities that may be unique to this community are the number of jobs in the fields of writing, editing and publishing. The variety of part-time jobs available lead to the conclusion that if the mature woman is ever to have a chance to prove her worth in the work force on a schedule that will enable her also to discharge her continuing responsibilities for her family, now is the time. We can thank our affluent society for this state of affairs. Whether or not this employment trend, if it is a trend, will continue through good times and bad will depend upon the degree of success women can achieve in performing both roles.

We hope that the discussions today have thrown some light on the employment picture. The Center for Continuing Education of Women office has files of vocational material—pamphlets and books. We also have catalogues of this University and many other schools in this area to aid in course selection. You are welcome to examine them all. If you have questions about vocational matters or anything else in the area of our competence, the staff of the Center will be glad to discuss them with you.

APPENDIX

LOCAL EMPLOYMENT OPPORTUNITIES

Several factors have increased the employment of college-trained women in our economy. Industries are hiring a greater proportion of skilled labor; women are acquiring more education and technical abilities; early marriages, smaller families, and labor saving devices now release women from full-time duties as housewife and mother by the time they reach their middle thirties. Nevertheless, a large number of mature and educated women are unable to find satisfying jobs even though skilled workers are in short supply. Three problems confront these women: 1) Their salable skills may be out of date. 2) Their home responsibilities, though diminished, may preclude full-time employment. 3) Some employers doubt the feasibility of part-time jobs or view the mature woman as a poor employment risk.

Although the Center for Continuing Education assists women to further their education, update their training, and select professional disciplines most likely to lead to future employment, it has become increasingly clear that educational efforts alone cannot guarantee such employment. Employer and employee attitudes and job schedules must undergo some revisions before the supply can meet the demand. Consequently, as part of the Center's preparation for the conference on "New Patterns of Employment," the staff conducted a pilot study of selected local employers to obtain some examples of specific job opportunities and to elicit prevailing attitudes towards the hiring of mature educated women on full or part-time jobs.

In keeping with the interest areas stressed in the conference, the study was limited to firms of the following types: research, development and manufacturing; printing, publishing and advertising; governmental agencies; The University of Michigan; and a small miscellaneous group. Information from 76 teaching or research units of the University and from 57 companies was obtained by interview, letter or telphone conversation during the winter of 1965-66. This sample does not represent all areas that might attract the educated woman. Merchandising, library work, elementary and secondary school teaching, social work, and health fields are by-passed in favor of the less familiar opportunities in research, administration, publicity and writing.

Research, Development, Manufacturing

Of the 35 research, development, and manufacturing firms replying, eleven employed fewer than 12 people. Five of these offered jobs to women with specialized training. Examples included:

> Part-time librarian, preferably with an M.A., to gather and classify information
>
> Publications assistant with typing, lay-out, graphic arts and printing knowledge to prepare pamphlets from rough copy
>
> Part-time research technician with a chemical and mechanical engineering background

Fourteen of the 35 firms employed from 20-90 people, twelve offered jobs to professionally trained women. Sample jobs included:

> Full-time college trained program analyst to develop and expand IBM systems in a small electronics firm
>
> Consulting or free-lance agent for art work, copy, advertising and related publicity duties
>
> Several part or full-time jobs for women with an engineering degree or background
>
> Part-time biologists, histologists, or invertebrate zoologists, preferably with a B.A., to prepare laboratory specimens
>
> Part-time opportunity for a woman with metallurgical or chemical knowledge to review chemical abstracts
>
> Librarian with multiple language skills

Ten of the 35 firms employed over 100 people. Seven of these offered both part and full-time positions to the educated woman. Such jobs included:

> Part-time writer with experience and technical knowledge to prepare proposals, product descriptions and brochures
>
> Part-time consulting engineer
>
> Part-time research biochemist for a manufacturing company

Ten of the 35 research, development and manufacturing firms claimed that heavy or rough working conditions, travel duties, or their newness or small size had precluded the use of trained women.

Advertising, Publishing, Printing

Some jobs are more amenable to part-time scheduling than are others. Several employers in the ten companies representing the advertising, publishing, and printing fields mentioned that part-time work at the higher level was very undesirable because of production schedules and client demands. "If a customer wants to know how his particular job is progressing we can't wait around until someone comes back to work." The majority of women in these firms are on semi-skilled production or clerical jobs. However, within the larger firms, part-time skills are sough for art work. writing copy, proofreading, drawing key lines, cataloging, and occasionally editorial research. One employer sumarized the problems in this field by stating:

> "If the present rate of expansion continues for the U.S. business as a whole, and for advertising and publishing in particular, we can foresee a severe shortage of trained, talented people in the communications arts. As this shortage develops, we shall indeed seek the assistance of able people on any schedule of employment that will attract them."

Governmental Agencies

Three of the eight governmental agencies surveyed reported a wide range of jobs for the educated woman especially in medical and biological research. Additional opportunities existed in public health and nursing, both part and full-time. Several research jobs existed. These involved compiling data, preparing reports and proposals on a number of subjects and could be part-time positions.

Miscellaneous

Results from four merchandising, financial, and public utility companies suggested that they are currently less flexible in their employment parctices than other groups surveyed. Routine clerical and sales jobs dominate their labor force, and part-time opportunities in administrative and staff positions are almost non-existant. However, these companies are much smaller than their urban counterparts, and have yet to develop strong ancillary departments in public relations, market research, and similar specialties.

The University of Michigan

The University offers a prime employment opportunity for the educated woman in Ann Arbor both because of its size and its need for the very professional it trains. Fifty-four of the seventy-six units surveyed offered many opportunities, both part and full-time. For example:

> Research assistant, full or part-time, with an M.A. in one of the social sciences plus skills in statistics, library research, and writing
>
> Classroom observer with a teaching certificate and experience for research projects
>
> Interpreters or guides for visitors to museums, which requires background in particular areas, such as botany
>
> Writer for preliminary reports, abstracts, or to edit manuscripts

Most of these jobs required at least a B.A. and characteristically required a person with multiple skills. Twenty-six individuals representing 22 units expressed no need for such women except as faculty members or in secretarial positions because graduate students were hired for all other professional jobs. The mature trained woman applying for such jobs must realize that many department chairmen and project directors prefer to give these jobs to their students because it helps the students both financially and professionally. Yet the value of continuity and stability can enhance the employment chances for a woman who can contribute flexibility, maturity and reliability to a staff.

Summary

There is a constant demand throughout Ann Arbor for the executive or "super" secretary. She is described as an educated, reliable woman who can absorb a variety of administrative duties such as accounting, supervising, counseling, writing, editing and even some research. Part-time positions are rare but may increase if the shortage remains acute. Several employers expressed the need for skilled draftsmen, a well-paid talent that could be exercised part-time. One suggested that women might start their own drafting organization to supply this skill when and where needed.

Virtually all firms contacted hired some women either in routine or professional capacities but only a few employers voiced definite opinions on the particular value or hazard of the mature woman or the part-time job. The following summaries of their feelings may help the prospective job hunter anticipate hurdles and sell herself more effectively.

> We have special interest in women who are permanent residents and not student wives who may disappear when their husbands finish school.
>
> Female employees are more expensive than males. Their group insurance is higher and absenteeism is a worse problem. Social problems arise when a woman's husband is a professional: she seems unwilling to accept a subordinate role. Some employers use women employees and part-time jobs to fight unions.
>
> Mature women are better employment risks and more permanent workers. They are experienced in coping with crises and enjoy their work more.

> We have generally found part-time workers more of a headache than a help. A part-time job has a way of expanding to a full-time job. Nevertheless, with the recruiting situation growing worse every week, we may be forced into hiring part-time people.
>
> Mature women are more satisfactory than the younger ones. They are dependable, consecientious, for the most part intelligent, and they don't get pregnant.
>
> We're completely sold on the usefulness of part-time workers. If there are women qualified for the work we do, we'd be delighted to see them. And women aren't the only ones anxious to find part-time or flexible jobs: many professional men would prefer to juggle various jobs than be boxed in by a particular position or "owned" by management.

The wide differences among the firms studied - their functions, their size, and occasionally their attitudes - makes further analysis difficult without a much larger sample. Research is needed to discover the pros and cons of hiring professionally trained mature women on a part-time basis. Experiments with innovative practices in scheduling the work day and the work week followed by an evaluative study of these experiments would show both employers and employees whether the game is worth the candle. If it is proven that more can be accomplished by well-qualified people with less turnover and for the same or less money by hiring part-time workers, employers will be more willing to experiment with new ways of scheduling. The economic and other advantages must outweigh the fuss and bother of change. If schedules are developed which will allow women to hold jobs as well as continue their family responsibilities, the talents of educated women can be extended to fields of gainful employment.

It seems clear from this local study that Ann Arbor's rapid growth, especially in research fields, offers women

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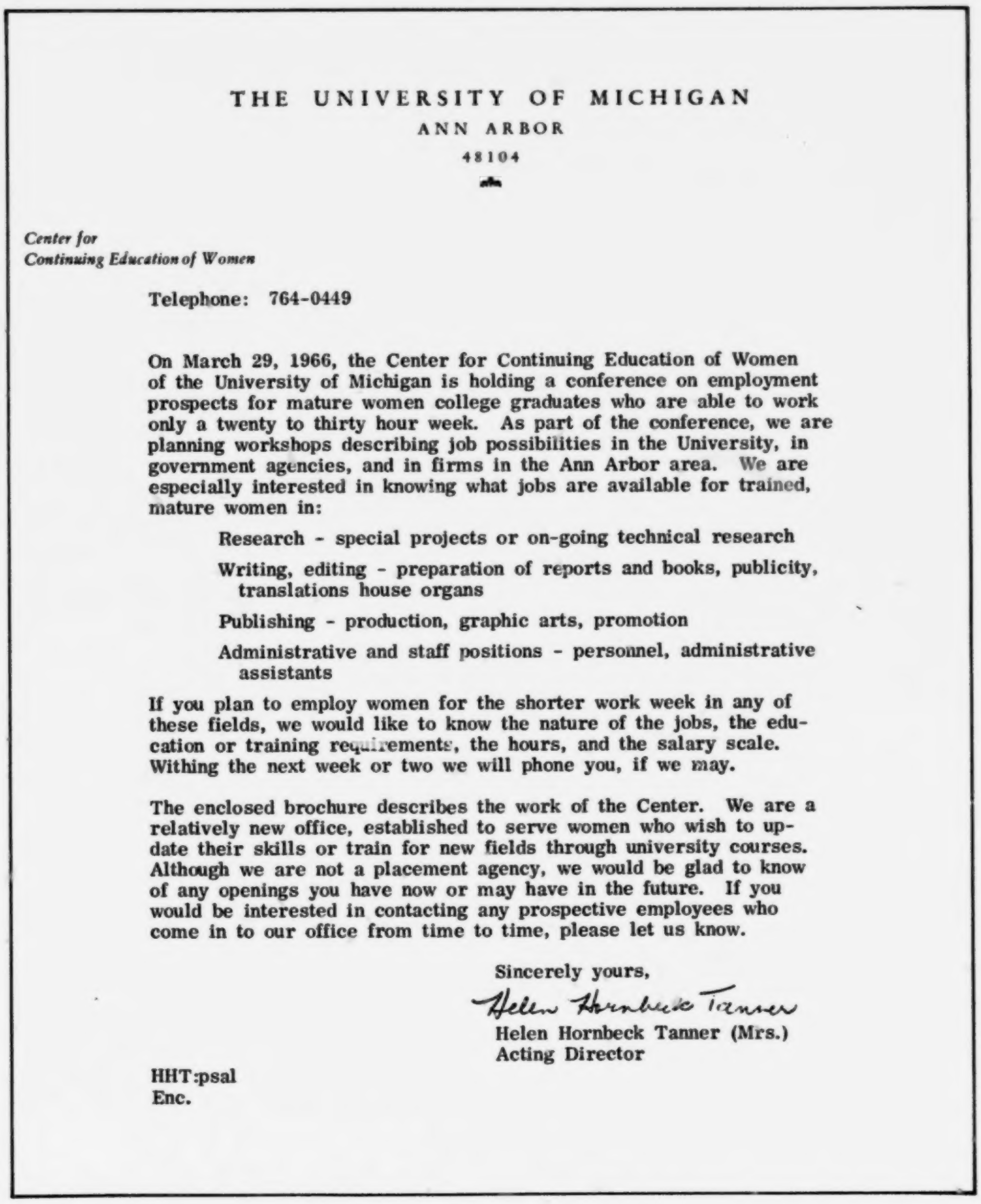
broad opportunities for employment and has obliged even the more conservative employers to consider adjusting work schedules to fit the needs of available talent. The mature educated woman still must be willing to prove herself on the job even if it means accepting routine duties or a temporary position at first, and she must realistically appraise the time her family will demand and not over-commit herself. However, never has the opportunity to modify the traditional full-time job been greater. A woman whose skills are current and whos motivation to work is strong has a chance to find her niche, especially if she can offer herself as a flexible, confident, reliable, and permanent employee.

LETTER TO LOCAL EMPLOYERS

In preparation for the conference, "New Patterns of Employment:, the following letter was sent to selected business firms and governmental agencies in the Ann Arbor area. A similar letter went to the heads of all schools, colleges, departments, institutes, museums, libraries and laboratories of The University of Michigan. The same form was followed in supplementary telephone conversations and interviews.



THE UNIVERSITY OF MICHIGAN
ANN ARBOR
48104

Center for
Continuing Education of Women

Telephone: 764-0449

On March 29, 1966, the Center for Continuing Education of Women of the University of Michigan is holding a conference on employment prospects for mature women college graduates who are able to work only a twenty to thirty hour week. As part of the conference, we are planning workshops describing job possibilities in the University, in government agencies, and in firms in the Ann Arbor area. We are especially interested in knowing what jobs are available for trained, mature women in:

Research - special projects or on-going technical research

Writing, editing - preparation of reports and books, publicity, translations house organs

Publishing - production, graphic arts, promotion

Administrative and staff positions - personnel, administrative assistants

If you plan to employ women for the shorter work week in any of these fields, we would like to know the nature of the jobs, the education or training requirements, the hours, and the salary scale. Withing the next week or two we will phone you, if we may.

The enclosed brochure describes the work of the Center. We are a relatively new office, established to serve women who wish to update their skills or train for new fields through university courses. Although we are not a placement agency, we would be glad to know of any openings you have now or may have in the future. If you would be interested in contacting any prospective employees who come in to our office from time to time, please let us know.

Sincerely yours,
Helen Hornbeck Tanner
Helen Hornbeck Tanner (Mrs.)
Acting Director

HHT:psal
Enc.

RESUME

The purpose of a resume is to give a prospective employer a picture of yourself: your abilities, experience, and accomplishments, and to indicate what you can do for his enterprise. There is no standard format; arrange your information to suit your special purpose. A resume usually lists the jobs you have held, in chronological order, beginning with the most recent, your employers' names andd addresses, dates of employment, and your education or other training.

Since your prospective employer is probably more interested in what you can do for his company than whether your previous jobs were paid or volunteer. list both paid and volunteer jobs together. If you spearate them it suggests that one experience was more valuable than the other.*

When applying for a specific job rather than canvassing a whole field, tailor your resume to the demands of that job, make the job title the heading of the resume, and select particular experiences for emphasis. Omit the unimportant or unrelated jobs.

Certain factual information is essential: your name, address, and telephone number, work experience and education. (If college is part of your education, it is not necessary to mention a high school.) Giving your age or other personal data is entirely optional at this stage; these facts, if important, will be discussed in the interview.

The following tips should be observed:**

Identify your level clearly: Mention years of experience if they are in your favor, either the total number or possibly the number of years in one or two important jobs.

Prove by example and be specific: Don't just generalize about your work. Demonstrate it with selected examples from the best of your experience. Say, "For four years . . .", not "For many years . . .". Say, "I worked on three projects, not "I worked on several projects."

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*See: Alice Gore King, Career Opportunities for Women in Business (E.P. Dutton and Co. Inc., 1963) Chapter I

**See: Austin Marshall, How to Get a Better Job (Appleton-Century, 1964) Chapter 10

Avoid these five most misused words: RESPONSIBILITY-don't claim responsibility for something; cite what you actually did. DUTIES - this work suggests that you were forced or ordered to work. HANDLED - you mean something more specific; find the exact term. OPPORTUNITY - you are not begging for an opportunity but offering a service. ETC. - if what you have in mind is worth mentioning, say so; if not, forget it.

Distinguish yourself: Review each paragraph, asking yourself, "Does this distinguish me from average?" Does your resume convey what special quality you can offer?

In conclusion, no matter how specific or general your resume is, it should be clear, succinct, without error - factual or typographical - and arranged in a layout attractive to the eye.

Sample Résumé (Specific)

FUND RAISING

Sally Robbins (Mrs. T. W.)
7 Orchard Drive
Cedar Falls, Michigan
Phone: 782-3446

EXPERIENCE

As Finance Director for the League of Women Voters of the United States, 1960-1965,
I wrote pamphlets on how to raise money, prepared script for a recorded, fictitious interview between a prospective contributor and a fund-raiser, conducted training sessions for fund-raisers in various parts of the country, made speeches to both fund-raisers and prospects on the importance of the work to be accomplished through the funds, carried on correspondence with 592 Leagues throughout the country on finance matters.

At County Chairman of the UNICEF 1954 finance campaign, I recruited chairmen in all the cities and towns in my county, held training and report meetings for their committees, kept in daily contact by phone with all chairmen, kept records for the entire operation and planned and conducted a victory dinner. In proportion to our population we were second in the nation in the amount of money raised.

In 1953, as a member of a team to raise money for our church, I took part in assessing the possible level of donations from members of the congregation, attended training sessions, and called on my list of members to ask for money. All but two pledged the amount expected.

EDUCATION

Northern College, Boston, North Dakota, B.A. 1940
Major: English

Central University, M.A. in Psychology, 1946
Stubenville, Vermont

Sample Résumé (General)

Sally Robbins (Mrs. T. W.)
7 Orchard Drive
Cedar Falls, Michigan
Phone: 782-3446

Experience

Fund Raising: Finance Director, League of Women Voters
of the United States, 1960-1965
County Chairman, UNICEF, 1954
Finance Solicitor, Westminster Church,
Cedar Falls, Michigan, 1963

Editing: Ten articles and one scientific treatise,
"Old Wine in New Bottles", 1959

Writing: Two booklets: *How to Raise Money*, 1954
How to Spend Money, 1956

Research: Research Assistant, Vocational Opportunities
Commission, Washington, D. C., 1948-1950

Teaching: Remedial Reading, Junior School, West Center,
Massachusetts, 1946-1948
Cedar Falls High School, Cedar Falls,
Michigan, 1940-1944

Education

Northern College, Boston, North Dakota, B.A. (English) 1940
Central University, Stubenville, Vermont, M.A. (Psychology) 1946

BIBLIOGRAPHY

From the wealth of reading material in the fields of women's roles today, her re-entry into the worlds of work and education, and from up-to-date specific occupational information sources, the following books and booklets are samples which have been published recently and are available in local libraries and bookstores. For further information consult librarians, as there is much more available, or come to the office of the Center for Continuing Education of Women in the Michigan League.

BOOKS - General Information

Center for Continuing Education for Women, The University of Michigan	Opportunities for Women through Education Michigan League, Ann Arbor, Michigan 48104, 1965. Paperback, 138 pp. $1.50. Proceedings of conference held March 16, 1965 at The University of Michigan, Ann Arbor, featuring keynote address by Esther Raushenbush, president of Sarah Lawrence College. Includes abstracts of seven afternoon workshops on: Education, Social Work, Library Sciences, Health Sciences, Mathematics-Physical Science-Engineering, Liberal Arts Program for Undergraduates and General University Information.
Cooper, Joseph D.	A Woman's Guide to Part-time Jobs Garden City, N.Y., Doubleday & Co., 1963. Paperback, 303 pp. $1.25. An overview of the many aspects of deciding whether to take on paid work, which job to take, self-em-

	ployment, and advice on job hunting. The author's experience in industry and government personnel fields has given him a good understanding of mature women seeking part-time jobs.
Cotton, Dorothy Whyte	The Case for the Working Mother N.Y., Stein and Day, 1965, 212 pp. $4.95. Guidelines for stay-at-home mothers who are trying to decide whether a paid job is possible or right for them. Examines the reasons mothers choose to work and the effects on their children, the necessity of the husbands' backing. Cites experiences and pitfalls in handling the dual role. The author is editor of Parents Magazine, mother of four, and wife of a psychiatrist.
Dennis, Lawrence E.	Education and a Woman's Life Washington, D.C., American Council on Education, 1963. $2.50. The proceedings of a conference on Continuing Education of Women held in Minnesota in 1962. Esther Raushenbush of Sarah Lawrence College is one of the contributors to this book. Several pilot projects of Centers for Continuing Education are described.
Farber, Seymour M.	Potential of Woman N.Y., McGraw, 1963. Paper-

	back, $2.95. Report of the 1963 Symposium which had as its objective the defining of some of the questions which society must answer if women are to live the full and useful lives which their relatively new-found freedom has brought them.
Ginzberg, Eli	*Life Styles of Educated Women* N.Y.C. 10027, Columbia University Press, 1966. $5.95 A report on the life patterns of over 300 talented and educated women and their relation to the world of work. It suggests private and public action that would permit such women to make the best use of their skills.
Haber, William Ferman, Louis A. Hudson, James R.	*The Impact of Technological Change: The American Experience* Kalamazoo, Michigan. The W.E. Upjohn Institute for Employment Research, 1963. A review of 20 years of research on technological change; identifies the four major problems which have received repeated attention: factors affecting re-employment of displaced workers, the process of finding a job, the mobility of displaced workers, and the economic and non-economic consequences of job displacement.
Journal of American Academy of Arts	Daedulus: *The Woman in America* 280 Newton St., Boston 46,

		Mass., 1964. The entire spring issue of this quarterly journal is devoted to the role of women today.
Likert, Rensis	NO	New Patterns of Management N.Y., McGraw-Hill, 1961. 279 pp. $6.95. A new theory of management with principles to guide organizational action. Written primarily for business industry, but applicable to any kind of organization.
Marshall, Austin	NO	How To Get a Better Job N.Y., Appleton-Century, 1964, 256 pp. $5.95. The official book of the Job Finding Forum of the Advertising Club of New York discusses self-appraisal and job hunting techniques.
Mueller, Kate H.	N	Educating Women for a Changing World Minneapolis, University of Minnesota Press, 1954. Women must study for themselves their precise status in each of their present roles as wives, mothers, citizens, earners, and as individuals, integrated personalities in their own right.
Myrdal, Alva Klein, Viola		Women's Two Roles N.Y., Humanities Press, 1956. $5.00. A study of the change in the educated woman's life as a result of expanding career opportunities, the need and desire to work, and the mechanization of housework

National Manpower Council	Womanpower N.Y., Columbia University Press, 1957. $5.00 Work in the Lives of Married Women N.Y., Columbia University Press, 1958. $4.75. Results of the conferences of the National Manpower Council called by President Eisenhower, probing such areas as education for re-entry into the labor force, employment problems peculiar to women, the extent to which women are indispensible to the national economy, and effects upon children of their mother's outside employment.
Nye, F. Ivan Hoffman, Lois	The Employed Mother in America Chicago, Rand McNally, 1963. $6.00 Professor Robert Blood of The University of Michigan is one of the contributors to this book which is based on very recent research.
O'Neill, Barbara Powell	Careers for Woman After Marriage and Children N.Y., Macmillan, 1965, 401 pp. $5.95. The training required for positions in areas of current need: remedial reading, rehabilitation counseling, city planning, landscape architecture, teaching, social work, library science, engineering, and health fields. Specific advice on problems of financing the needed education and adjusting to a "second career."

President's Commission on the Status of Women	Report of American Women Washington, D.C., Supt. of Documents, U.S. Gov't. Printing Office. October, 1963. The report of the commission which was appointed by President John F. Kennedy to look into the development of women's potential in making fuller use of their abilities in order to enhance the quality of American life.
Schwartz, Jane	Part-Time Employment: Employer Attitudes on Opportunities for the College-Trained Woman 541 Madison Avenue, N.Y. Alumnae Advisory Center, Inc. 1964. $1.00. This booklet, which considers the interests of the employer, should be a helpful guide to the woman seeking part-time employment. Based on interviews in the New York area with representatives from organizations in five broad fields of employment, an effort was made to discover the full scope of attitudes on part-time employment.
White, Martha S.	The Next Step - A Guide to Part-Time Opportunities in Greater Boston for the Educated Woman 78 Mount Auburn St., Cambridge, Mass., The Radcliffe Institute for Independent Study, 1964. $1.50. Suggestions for other areas a well as Boston; references to many

	other pertinent booklets.
Winter, Elmer W.O	A Woman's Guide to Earning a Good Living N.Y., Simon & Schuster, 1961. $4.95. This book offers advice on studying your won situation prior to seeking a job, analyzes the seven groups of women who work, provides a step by step guide to aid you in looking for work, lists the fields which offer the best employment opportunities for women and gives information on self-employment opportunities. Real life examples illustrate the point Mr. Winter makes.
Women's Bureau U.S. Department of Labor H	Handbook on Women Workers Washington, D.C., Supt. of Documents, Bulletin 285, 1964. 55¢. Basic information concerning women's employment and occupations, age and marital status, earnings and income, education, and state laws affecting their status.
W.O	Job Horizons for College Women in the 1960's Washington, D.C., Supt. of Documents, U.S. Government Printing Office, Bulletin 288, 1964. 30¢. Describes briefly the many careers open to college women; indicates the educational and training requirements for the professions.

ROSTER OF ATTENDEES

CONFERENCE ON NEW PATTERNS OF EMPLOYMENT

Vicki L. Abels
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Jackson, Michigan 49203

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Pinckney, Michigan

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